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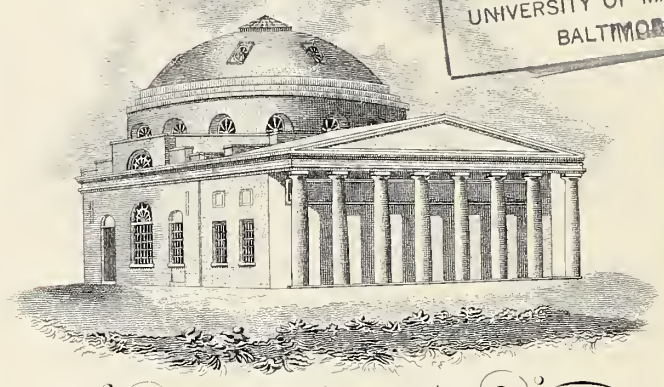

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EXPERIENCES WITH CORTISONE GIVEN ORALLY, Ephraim P. Engleman, Peter Kunkel, Joseph E. Welsh, Jr., and M. Glenn Molyneaux, San Francisco 1

EXPERIENCE WITH CORTISONE AND ACTH IN A PRIVATE CLINIC, Marcus A. Krupp, Milton Saier, Frances Keddie, Ralph Tanner, and A. M. Snell, Palo Alto 6

EXPERIENCE WITH ACTH AND CORTISONE IN PRIVATE PRACTICE, Albert Rowe, Jr., Gordon R. Lamb, Fletcher B. Taylor, and Laurance W. Kinsell, Oakland 11

USE OF THE ROCKING BED TO AUGMENT VENTILATION IN PATIENTS WITH POLIOMYELITIS, Clarence W. Dail, Elizabeth Austin, O. L. Huddleston, and Albert G. Bower, Los Angeles 15

TRISETHYLENE-IMINO-S-TRIAZINE (TRIETHYLENE MELAMINE OR TEM) IN THE TREATMENT OF NEOPLASTIC DISEASES, Michael B. Shimkin, Howard R. Bierman, Keith H. Kelly, Elizabeth Lowenhaupt, and Arthur Furst, San Francisco 26

ATTITUDES TOWARD THE DUBIOUS COMPENSATION CLAIM, Christopher Leggo, Crockett 35

CASE REPORTS:

Pheochromocytoma, Stanley H. Hoffman and William P. Longmire, Jr., Los Angeles 40

Dermoid Cyst of the Omentum, Howard B. Kirtland, Jr., San Diego 44

Bronchiogenic Cysts, Elmer C. Rigby and Phillip L. Rossman, Los Angeles 45

Circumcaval Ureter, John A. Dougherty, Oakland 48

EDITORIALS, 51 • CALIFORNIA MEDICAL ASSOCIATION, 53

NEWS AND NOTES, 64 • INFORMATION, 66 • BOOK REVIEWS, 69

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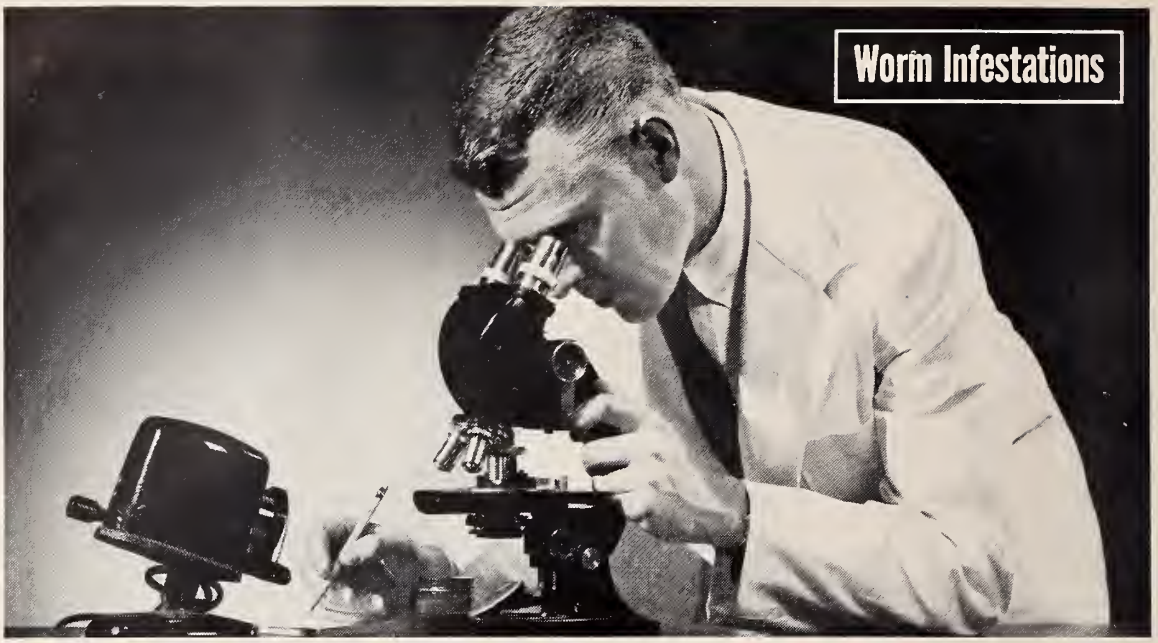
OF THE CALIFORNIA MEDICAL ASSOCIATION

UME 75 NUMBER 1



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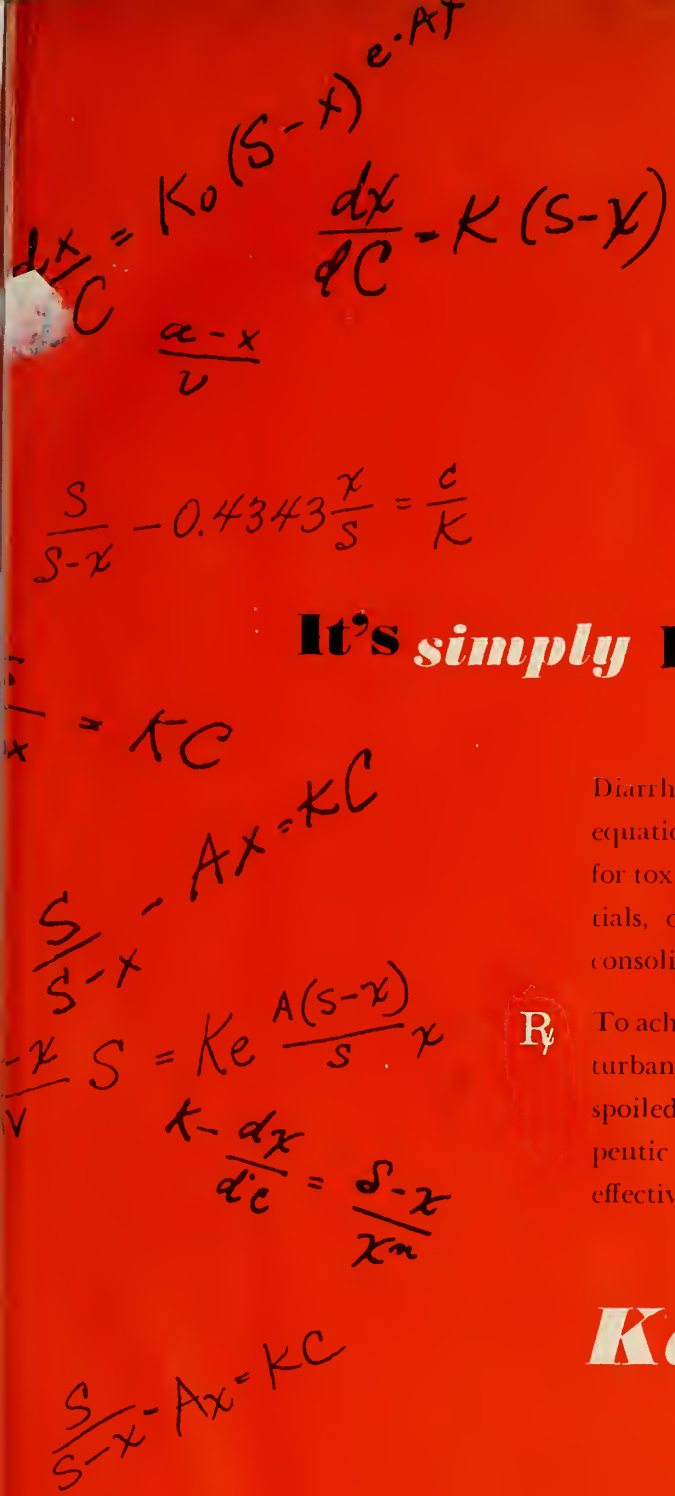

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TOTAL PHYSICIANS IN U. S. AT ALL-TIME HIGH OF 209,040

There were 209,040 physicians in continental United States as of December 15, 1950, an all-time high record, according to the annual medical licensure report of the American Medical Association.

The report showed there were 6,002 additions to the medical profession in the United States and its possessions last year. Against this there were 3,794 deaths, making a net gain of 2,208 in the physician population. This compares with an addition of 5,866 physicians in 1949, and a net gain of 2,266 after allowing for 3,600 deaths.

Made public in a recent issue of the *Journal of the American Medical Association*, the report detailed the medical licensure statistics for 1950. It was prepared by Dr. Donald G. Anderson of Chicago, secretary of the A.M.A. Council on Medical Education and Hospitals, and Miss Anne Tipner, also of Chicago.

The report presented evidence of the high medical training rating of the medical schools of the United States, all 72 of which now are approved by the council.

Of 4,955 graduates of the existing United States schools who last year took state board examinations to practice medicine, 4,808 (97.1 per cent) passed. The 1949 passing percentage was 96.8 per cent.

Against this record, only 673 of the 1,248 graduates of other schools (53.9 per cent) successfully passed their state examinations. The percentages by other medical schools were: Approved Canadian schools, 91.5 per cent; extinct schools, 93.3; foreign, 45.0; unapproved schools, no longer existent, 37.8; schools of osteopathy, 72.0. The over-all passage was 5,481 out of a total of 6,203 examined, or 88.4 per cent. The 1949 percentage was 87.5.

Of the 160 graduates of approved medical schools in the United States and Canada who failed in tests last year, 94 had completed their studies within the last five years and 66 were graduates before 1946.

In addition to the doctors with degrees from approved United States schools who took state board examinations, there were 1,700 who were examined by the National Board of Medical Examiners. Of these, all but 14 passed. All states excepting Florida, Montana, Texas and Wisconsin accept the national board's certificate.

Twenty-one approved schools in the United States had no failures before medical licensing boards last year.

More doctors educated in foreign countries are appearing before American boards for licenses, and, although the percentage of failures is large, the number of applicants receiving licenses is on the upgrade. In 1950 successful examinations were taken by 359 graduates of foreign faculties of medicine, outside of Canada. This compares with 319 in 1949 and 308 in 1948. Of those who passed last year, 185 had a record of previous failure.

To aid examining boards, the A.M.A. Council on Medical Education and Hospitals and the executive council of the Association of American Medical Colleges have prepared a list of foreign medical schools,

(Continued on Page 18)

In a five year controlled study* recently completed at the gastrointestinal clinic of a large Chicago hospital, comparative tests were made of available antacids in the treatment of gastroduodenal ulceration.

Various resinous substances were tested including "the new type of 'antacid' "—Resmicon—a synergistic combination of a finely dispersed ion-exchange polyamine resin with a specially processed form of gastric mucin.

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*Steigmann, F., and Schlesinger, R. B.: A Resin-Gastric Mucin Mixture in the Medical Management of Peptic Ulcer, American J. Dig. Dis. *17*:361-365 (Nov.) 1950.

**Scientific Exhibit of the A. M. A., Atlantic City Session, 1949.

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TOTAL PHYSICIANS IN U. S. AT ALL-TIME HIGH OF 209,040

(Continued from Page 10)

the graduates of which may be considered on the same basis as those of approved medical schools in the United States.

The list, published in the *Journal*, contains the names of 27 medical schools in the United Kingdom, five in Switzerland, four each in Belgium and the Netherlands, three in Sweden, two in Finland and one each in Brazil, Denmark, Lebanon and Norway. There are nine Canadian medical schools which have the approval of the A.M.A. Council.

Twenty-three licensing boards have adopted the list of foreign schools. Eleven of these boards limit the licensure of foreign-trained physicians to graduates of schools on the list; two boards specify that graduates after Jan. 1, 1940, are not eligible unless they have graduated from one of these schools, while one board will accept graduates of other schools if they possess the certificate of the National Board of Medical Examiners or the certificate of one of the American boards in the specialties. The remaining nine boards reported they accept the list but do not specify whether they also accept graduates of other schools. There are only 15 states in which foreign-trained physicians are not eligible for licensure. During the past year, Georgia, Utah, and the Virgin Islands modified their regulations and

(Continued on Page 26)

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1. *Dowling, H. F., et al.: Ann. New York Acad. Sc. 53:433 (Sept. 15) 1950.*
2. *Sayer, R. J., et al.: Am. J. M. Sc. 221:256 (March) 1951.*

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TOTAL PHYSICIANS IN U. S. AT ALL-TIME HIGH OF 209,040

(Continued from Page 18)

will accept applications for licensure from foreign-trained physicians.

The licensing boards of four states have announced that they are willing to make special efforts to aid displaced physicians in following their profession until they meet the requirements for licensure.

The present report also pointed out that the two associations have created a Joint Committee on Medical Education in Time of National Emergency to increase further the production of physicians.

"This committee," the report stated, "has recommended that medical schools should exert effort to admit as many medical students as they can train without deterioration of the quality of medical training they can provide. The committee has further recommended that provision should be made for the increased financial support essential to the provision and maintenance of the increase in faculty, facilities and buildings required to accomplish the proposed increase in enrollments."

It was also pointed out that the freshman class enrolled in medical schools for the 1950-51 session exceeded 7,000, an all-time high. Medical schools also are being urged to reorganize their curriculum to give proper emphasis to subjects of particular

(Continued on Page 32)

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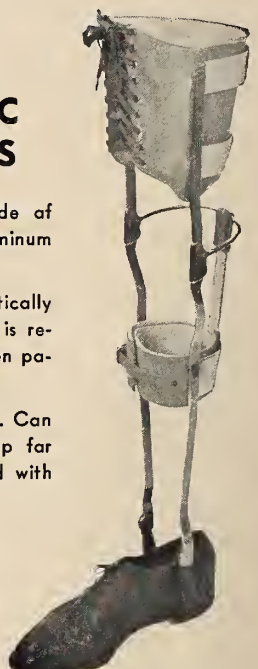

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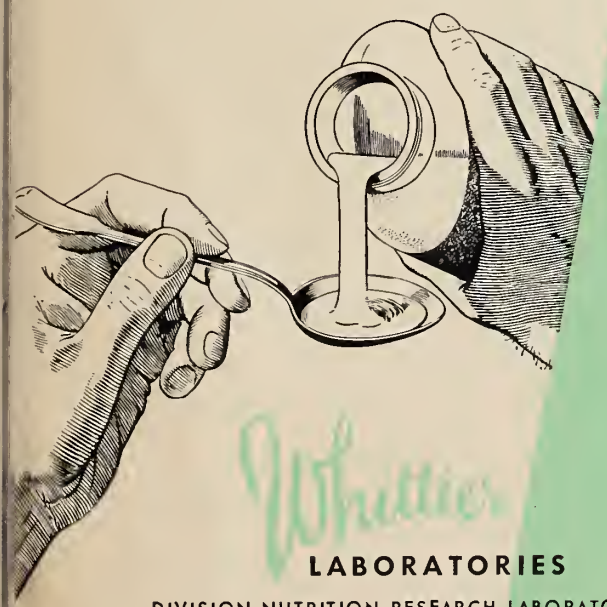

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(Continued from Page 26)

importance for the national health, security and welfare in time of national emergency, it was stated.

There were 12,209 licenses to practice issued by state boards last year. These include 5,454 as the result of examinations and 6,755 on the basis of reciprocity and endorsement of other state or national board certificates. Licenses are not necessarily issued in the year of examination. The total also may include persons licensed in more than one state in a given year.

California led with the granting of 1,356 licenses to practice medicine and surgery in that state.

CONCEPTS OF WHOLESOME FOOD EXPLAINED BY A. M. A. COUNCIL

Because of the widespread use of chemicals in connection with the growth, storage, preparation or final processing of foods, the Council on Foods and Nutrition of the American Medical Association recently offered the following definition:

"A wholesome food is a product which makes a significant contribution to human dietary requirements and which is clean and free from micro-organisms and chemical additives of such quality or in such quantities that they may be directly injurious or result in reduced nutritional quality."

The council pointed out that it long has been

(Continued on Page 33)

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CONCEPTS OF WHOLESOME FOOD EXPLAINED BY A. M. A. COUNCIL

(Continued from Page 32)

recognized that nutritional status is closely related to the quality of food eaten, and added:

"It also has been recognized that wholesome foods must be clean and free from extraneous matter that may be incorporated as the result of careless or uncleanly methods of growth, storage or processing. Although micro-organisms which contribute to the value of a food may be incorporated intentionally or accidentally, disease-producing organisms have no place in foods intended for human consumption.

"Although these basic concepts have acquired general recognition, the development recently of a large number of chemical technologic aids has emphasized the necessity for recxamining our idea of a wholesome food, particularly from the point of view of its freedom from chemical additives which may be harmful to the consumer because of toxicologic effects or because their incorporation in food causes or makes possible the reduction of nutritive value."

The statement was issued by Dr. James R. Wilson of Chicago, secretary of the council.

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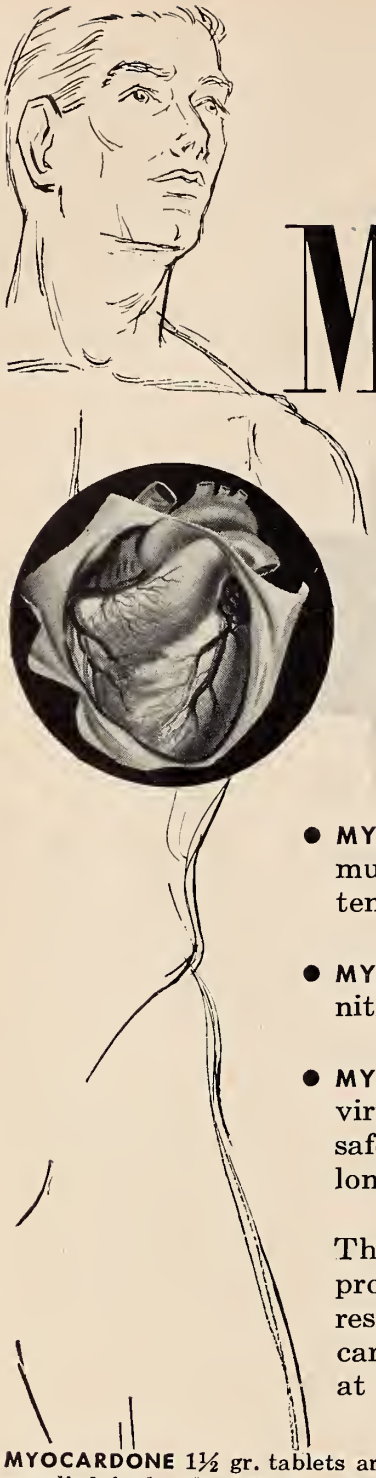

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A. M. A. COUNCIL SAYS ALUMINUM UTENSILS NOT INJURIOUS TO HEALTH

The use of aluminum cooking utensils in no way is injurious to health, according to a statement issued by the Council on Foods and Nutrition of the American Medical Association.

The position of the council was made known as a result of periodic rumors that foods cooked in such utensils affect health because of injurious substances imparted by the vessel, according to Dr. James R. Wilson of Chicago, secretary of the council.

"Aluminum abounds in the earth's crust and is widely distributed in nature, being present in a wide range of edible plants," said the council. "Undoubtedly man has ingested small quantities of aluminum daily since he came upon the earth. Aluminum compounds also are important and useful therapeutic agents.

"The possibility that aluminum utensils can impart injurious agents to the foods cooked in them has been extensively investigated. Up to the present time there has been no cogent scientific evidence indicating that the minute traces of aluminum that may be imparted to food in the process of cooking are in any way injurious to the consumer.

"As for the rumor that the use of food prepared in aluminum cooking utensils is a factor in the causation of cancer, it may be added also that there is absolutely no scientific basis in support of this view."

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Experiences with Cortisone Given Orally

EPHRAIM P. ENGLEMAN, M.D., PETER KUNKEL, M.D., JOSEPH E. WELSH, JR., M.D., and M. GLENN MOLYNEAUX, M.D., *San Francisco*

SUMMARY

The advantages of the oral administration of cortisone, when compared with cortisone given intramuscularly, include the more rapid appearance of therapeutic effects, which is of importance in the therapy of acute disease, and the faster dissipation of effects when the hormone is discontinued, which is of value when dangerous reactions occur. Oral dose schedules depend upon the degree of urgency or chronicity of the treated disease. In acute diseases the therapeutic results, in general, were disappointing. Cortisone may be of greater value in the long-term maintenance treatment of certain chronic diseases. By long-term therapy the authors mean practically continuous treatment until either the disease goes into spontaneous remission or undesirable effects of the drug require cessation of treatment. Critical selection of patients and constant supervision of therapy are vital to the successful administration of cortisone. Even with these precautions, however, the therapeutic use of cortisone must be regarded as experimental until the passage of time permits better appraisal of harmful effects.

APPROXIMATELY one year ago, the efficacy of orally administered cortisone was first reported.[4, 10] The numerous accounts of its spectacular therapeutic effects have popularized the use of cortisone to such an extent that in many instances it is wasted on patients indiscriminately selected for treatment. The fact that it may be administered conveniently and effectively in oral doses has often encouraged the improper use of the drug.

A detailed discussion of the effects of cortisone in specific diseases is not intended in this report: instead, emphasis will be put upon certain basic principles concerning the administration of cortisone by the oral route.

COMPARISON OF ORAL AND INTRAMUSCULAR ROUTES

In the administration of cortisone, the oral route has certain advantages over the intramuscular route which make the use of the latter undesirable unless there are contraindications to oral therapy. It has been shown previously[2] that cortisone given in an effective dose by mouth produces therapeutic effects more rapidly (usually within 12 hours) than cortisone injected intramuscularly. Whether the tablets* or the injectable suspension in syrup is used, effec-

Attending Physician, Internal Medicine, Veterans Administration Hospital, San Francisco; Consultant in Arthritis, Veterans Administration Regional Office, San Francisco; Assistant Clinical Professor of Medicine, University of California School of Medicine (Engleman); Residents in Internal Medicine, Veterans Administration Hospital, San Francisco (Kunkel, Welsh, Molyneaux).

From Veterans Administration Hospital and Regional Office, San Francisco; Division of Medicine, University of California School of Medicine; and Maimonides Health Center, San Francisco.

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Presented as part of a symposium on Cortisone and ACTH before the Sections on General Medicine and General Practice at the 80th Annual Session of the California Medical Association, May 13-16, 1951, Los Angeles.

* Cortisone tablets were made available through the courtesy of Dr. A. Gibson, executive director, Medical Division, Merck & Company, Inc.

tive oral doses have been no more than 30 per cent greater than those given parenterally.[2]

The promptness of the therapeutic effect of cortisone given orally indicates that this hormone is absorbed more rapidly from the gastrointestinal tract than from intramuscular depots. This is obviously an important advantage in the treatment of acute diseases.

A second advantage of the oral over the intramuscular route is the brief duration of action.[2] For example, when therapy with oral doses of cortisone is discontinued, or if the dose is reduced to suboptimal levels, relapse usually occurs within 24 hours. In contrast, experience has shown that when cortisone has been injected intramuscularly, the effects often persist for several days following cessation of the drug. The brevity of action of the oral dose is of value, since it permits prompt termination of the effects of cortisone should signs of danger develop. Because of the rapid dissipation of an oral dose, cortisone administered by this route is given three or four times daily to maintain a constant therapeutic effect.

The clinical impressions of the speed of absorption and excretion of orally administered cortisone have been substantiated by recovery experiments.[13] Time of appearance and rate of excretion of cortisone in the urine following oral administration have been measured. It has been shown that cortisone appears in the urine within ten minutes of its ingestion, while no measurable cortisone appeared at any time during the intramuscular administration of 200 mg. of cortisone in 24 hours. It is assumed that the rate of absorption of cortisone from intramuscular depots is so slow that the amount of the drug in the blood never reaches a level (renal threshold) at which it is excreted through the kidneys. Cortisone disappears from the urine within 48 hours after termination of administration by the oral route.

CONTRAINDICATIONS TO CORTISONE THERAPY AND SELECTION OF PATIENTS

In the selection of patients for therapy with cortisone certain contraindications must be considered. Any significant degree of emotional disturbance renders the use of cortisone undesirable.[15] Many of the serious psychiatric complications in patients treated with cortisone have been observed in persons who were unstable prior to treatment. Because of the effect of cortisone on electrolyte and water metabolism,[18] patients with renal insufficiency and diminished cardiac reserve should not be given the hormone. The effect of cortisone upon blood pressure[18] makes hypertensive persons poor candidates for treatment. Although diabetes mellitus can be controlled with adjustment of insulin dosage,[1] the aggravation of this disease by cortisone makes its use inadvisable in diabetic patients. Cortisone is also contraindicated in patients with a history of peptic ulcer because of the reported deleterious results.[14] The hormone has been shown to intensify experimentally induced tuberculosis in animals;[7] consequently, it should not be given clinically to patients with active or latent tuberculosis until more is known of its effects. Cortisone inhibits growth in young animals[19] and therefore must be used cautiously in children when long-term therapy is contemplated.

The following clinical observations were made during the past year on 77 patients selected from the Veterans Administration Hospital, San Francisco, and from private practice for treatment with cortisone. The patients were divided into two groups. The first group consisted of 28 patients with acute diseases, selected for short-term treatment. The second group contained 49 patients with chronic diseases for which long-term treatment was contemplated. No patient with any of the stated contraindications was included in this study. Each patient with chronic disease was first given conservative conventional treatment and was treated with cortisone only after the therapeutic response to the older methods had been unsatisfactory.

DOSE, ADMINISTRATION, AND THERAPEUTIC RESULTS

In the treatment of acute diseases, in order to obtain rapid and maximal therapeutic effect, large initial oral doses of cortisone were used—approximately 300 mg. daily—with a gradual reduction in amount as symptoms regressed. In the present series, the total dose for patients with acute diseases varied between 700 and 4,600 mg. over a period of five to 23 days (see Table 1). In acute gouty arthritis, acute bursitis, status asthmaticus, dermatitis venenata, exfoliative psoriasis, and acute eczematoid dermatitis the therapeutic results, in general, were disappointing. Although subjective, and even objective, improvement occurred in most patients, recovery was seldom accelerated and complete recovery was infrequent.

In the long-term treatment of chronic diseases, it was found unnecessary to use large "priming doses" of cortisone. A daily dose of 100 mg. was satisfactory in most cases. In the group of patients with

TABLE 1.—*Therapeutic Results of Oral Cortisone in Certain Acute Diseases*

Diagnosis	Total No. of Patients	Excellent Results* No. of Patients	Per Cent of Total	Total Dose, mg.	Days of Treatment
Acute gouty arthritis	11	5†	45%	1,045-2,585	8-22
Acute bursitis, shoulder	8	4	50%	984-1,500	5-12
Acute bursitis, trochanteric	1	0	0	1,075	10
Status asthmaticus	3	0	0	700-1,750	7-12
Dermatitis venenata, severe	2	0	0	1,300-1,575	9-12
Exfoliative psoriasis	2	0	0	4,200-4,600	21-23
Acute eczematoid dermatitis	1	0	0	1,950	10

* Prompt recovery without relapse after withdrawal of cortisone.

† Each patient received colchicine, 1.5 mg. daily, beginning on the third day of cortisone therapy.

chronic diseases, the initial daily dose was slowly reduced after the first two or three weeks of treatment in order to establish the minimal amount for effective maintenance. In most instances, it was found to range from 50 to 75 mg. daily.

In such long-term therapy, no effort was made to keep the patient symptom-free. "Maintenance dose" as the term is here used is that amount of cortisone which produces the desired therapeutic functional result, but which, at the same time, permits a minimal break-through of the symptoms and signs of disease. It is believed that this procedure provides not only for greatest economy in the use of the drug but also for reduction in the incidence of harmful effects. It must be emphasized that the size of the maintenance dose is not necessarily static and is always subject to change; it should fluctuate according to the spontaneous improvement or relapse which characterizes most chronic diseases.

Continuous long-term maintenance therapy for as long as 21 months was successfully maintained in 49 patients with rheumatoid arthritis, chronic gouty arthritis, bronchial asthma, atopic keratitis, chronic urticaria, chronic eczematoid dermatitis, sarcoidosis, Addison's disease, and sympathetic ophthalmia (Table 2). Ten of these patients had received intramuscular injections of cortisone prior to the introduction of oral therapy. No claim is made for the superiority of orally administered cortisone over well-established therapeutic regimens in the treatment of these diseases; it is simply pointed out that cortisone administered over a period of three months or longer successfully controlled the disease in a substantial number of patients.

PRECAUTIONS AND UNDESIRABLE EFFECTS

Routine hospitalization should not be required for the institution of therapy with cortisone. However, most of the patients in the present series were hospitalized during the first two weeks of treatment, and they were observed subsequently on an outpatient basis. In most of a previously reported series of cases,[3] a variety of laboratory tests were done both before and during administration of the hormone, but little positive information was thus obtained. As a result, the studies done before cortisone was used were later limited to routine weight and blood pressure readings, an x-ray film of the chest, an electrocardiogram, a serum cholesterol determination and a single postprandial blood glucose determination. A low salt diet was not prescribed routinely except when cortisone was given in large doses. At that time, in addition to salt restriction, potassium salts were given prophylactically.

Table 2.—*Examples of Continuous Oral Cortisone Therapy for Three Months or Longer with Satisfactory Maintenance of Improvement*

Diagnosis	Number of Patients	Months* of Treatment	Daily Maintenance Dose, mg.
Rheumatoid arthritis	12	3-6	25-87.5
Rheumatoid arthritis	15	6-12	12.5-87.5
Rheumatoid arthritis	8	12-21	32-100
Chronic gouty arthritis	2†	9-13	37.5-75
Bronchial asthma	2	8-12	37.5-75
Atopic keratitis and dermatitis	1	7	125
Chronic urticaria, cause unknown	1	4	40
Chronic eczematoid dermatitis	2	7	75
Sarcoidosis	2	3-4	40
Addison's disease	2	6-10	25
Sympathetic ophthalmia	2	4-5	25-100

* Patients receiving cortisone for more than 11 months were previously given cortisone intramuscularly.

† Each patient received colchicine, 1 to 1.5 mg. daily.

Observations during the administration of cortisone were important and simple. The patient was questioned for unusual mood-swings. Overstimulation and depression frequently revealed early evidence of psychic disturbance. Often, rounding of the face, changes in body contour, and other evidence of hyperadrenalism were noted. Repeated determination of blood pressure disclosed diastolic hypertension in many instances. Downward revision of the dose of cortisone caused most of these undesirable effects to disappear, except the moon face. Sudden increase in weight, requiring restriction of salt and use of a mercurial diuretic, rarely occurred in patients receiving low maintenance doses of cortisone.

Determinations for sugar in the urine were done bi-weekly on all patients. In two patients with glycosuria, normal blood glucose levels revealed a lowered renal glucose threshold. Increasing blood cholesterol levels up to 436 mg. per 100 cc. were noted in four of 20 patients so tested. The significance of this increase is unknown. Hyperglycemia and hypokaliemia did not occur. Other possible complications of therapy with cortisone, such as psychoses,[15] convulsive seizures,[17] congestive failure,[8] vascular thromboses,[3] masked infection,[3] and interference with healing,[3] were not observed. Cushing's facies was commonly present, but it was not regarded as an indication for termination of cortisone. In only three cases was it considered necessary to discontinue the hormone because of untoward effects which persisted despite downward adjustment of dose. These effects included hypertension in one case, mild depression in another, and severe anxiety in the third. In these three cases the duration of treatment was five months, 12 months, and 10 days respectively. All the undesirable effects of cortisone disappeared when administration of the hormone was discontinued.

It seems likely that the infrequency of severe undesirable effects was due, at least in part, to careful selection of patients, to the coincidental exclusion of patients with diffuse vascular disease,[16] and to the use of small maintenance doses of cortisone. The simple precautions taken during the administration of cortisone also played an important part in the control of serious side effects. When treatment with cortisone was started, the patient was examined at

TABLE 3.—*Eosinophil Response to Daily Slow Intravenous ACTH, 25 mg., in Rheumatoid Arthritis Patients Receiving Continuous Cortisone Therapy for 4 to 7 Months*

Patient	Daily Dose of Cortisone (mg.)	Months of Cortisone Therapy	Intravenous ACTH: Duration of Daily Intravenous Injection (Hours)	Intravenous ACTH: Day of Eosinopenic Effect	Intravenous ACTH: Eosinophil Counts on Day of Significant Decrease: Pre-ACTH	Post-ACTH	Per Cent Decrease
I. B.	56	4	12	1st	99	11	89
N. H.	64	7	12*	2nd	198	16	92
G. J.	50	5	12	1st	330	88	74
F. K.	75	7	6	1st	209	84	60
B. L.	66	6	12	2nd	132	11	92
I. L.	50	4	6	2nd	150	41	73
M. M.	62½	7	12*	2nd	431	31	93

* Duration of intravenous injection ACTH on previous day had been 3 hours.

TABLE 4.—*Eosinophil Response to Daily Slow Intravenous ACTH, 25 mg., in Rheumatoid Arthritis Patients Receiving Continuous Cortisone Therapy for 9 to 14 Months*

Patient	Daily Dose of Cortisone (mg.)	Months of Cortisone Therapy	Intravenous ACTH: Duration of Daily Intravenous Injection (Hours)	Intravenous ACTH: Day of Eosinopenic Effect	Intravenous ACTH: Eosinophil Counts on Day of Significant Decrease: Pre-ACTH	Post-ACTH	Per Cent Decrease
E. B.	50	11	12	2nd	374	110	71
F. H.	37½	14	3	2nd	330	88	74
A. L.	75	14	12	2nd	220	70	69
L. L.	87½	10	3	2nd	220	82	63
W. L.	100	14	12*	4th	209	60	72
E. M.	75	11	12*	2nd	431	31	93
J. R.†	37½	9	12	2nd	572	27	95

* Duration of intravenous injection ACTH on previous day(s) had been 3 hours.
† Diagnosis: chronic bronchial asthma.

least once daily. Patients receiving maintenance doses of cortisone were observed at least once weekly, not only for early signs of toxicity but also in order to reevaluate the maintenance dose requirements.

Adrenocortical atrophy has been described[11] following administration of large doses of cortisone and is presumably due to suppression of pituitary secretion of adrenocorticotropic hormone. This factor has led to the recommendation of periodic withdrawal of cortisone or alternating courses of cortisone and ACTH.[9] In this study, however, cortisone was deliberately administered continuously—without alternate courses of ACTH—to patients requiring maintenance therapy. Except for occasional mild weakness, no clinical evidence of adrenocortical insufficiency was encountered.

Gordon[6] and co-workers recently reported that the continuous, slow intravenous administration of ACTH stimulates the adrenal cortex much more effectively than ACTH given intramuscularly. Maximal adrenal stimulation by any given dose of ACTH is obtained when the hormone is given by the constant drip technique over a period of 12 to 24 hours. The effectiveness of this method of adrenal stimulation decreases as the duration of the intravenous injection decreases. Nevertheless, in patients with normal adrenal function, Krupp and Engleman[12] observed a consistent, excellent response to 25 mg. of ACTH when it was given intravenously over a period of three hours.

In order to evaluate their adrenocortical function, 14 of the patients given cortisone for long terms were given ACTH intravenously for periods varying between three and 12 hours. In each patient so tested, adrenocortical function was manifested by excellent eosinopenic response to ACTH, despite the continued ingestion of cortisone (Tables 3 and 4). It appears that irreversible adrenal atrophy is not a likely result of long-term treatment with cortisone when the prescribed maintenance doses are used. It must be noted, however, that more than one intravenous injection of ACTH was often required in order to demonstrate adrenal responsiveness. The slower than normal response to intravenous ACTH is compatible with the observation[18] that there is a depression of adrenal cortex function during therapy with cortisone even when small doses of cortisone are used. It therefore follows that it is necessary to be constantly alert during cortisone therapy for periods of severe stress and the patient's possible need of more cortisone, or even ACTH. Furthermore, sudden withdrawal of cortisone should be avoided. Gradual reduction of the daily oral dose of cortisone prior to the termination of treatment may permit the secretion of endogenous ACTH and the return of normal adrenal function, so that symptoms of adrenocortical insufficiency will not appear. Failure to do so in a patient recently called to the authors' attention[5] resulted in an Addisonian crisis. It has been the authors' practice to reduce the daily dose by 12.5 to 25.0 mg. every two or three days

before complete withdrawal of the hormone. The concomitant use of ACTH may also be of value during cortisone withdrawal.

DISCUSSION

Cortisone administered by the oral route appears to be an invaluable addition to the therapeutic armamentarium. The hormone may be of particular value in the long-term maintenance treatment of chronic diseases. By long-term therapy, we mean practically continuous treatment until either the disease goes into spontaneous remission or undesirable effects of the drug require cessation of treatment. This implies that the patient can financially afford such long-term therapy and that the future supply of the hormone is assured: otherwise, treatment of chronic diseases with cortisone should not be considered. It is emphasized that critical selection of patients and constant supervision of therapy are vital to the successful administration of cortisone. Even with these precautions, however, the therapeutic use of cortisone must be regarded as experimental until the passage of time permits better appraisal of harmful effects. It is the authors' opinion that, with the exception of the critically ill patient in such precarious condition that heroic treatment is required, all patients should be given a reasonable period of conventional therapy before treatment with cortisone is instituted. If the disease progresses despite these measures, and assuming that the patient has a disease known to respond favorably to the hormone, the therapeutic use of cortisone may then be considered.

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Experience with Cortisone and ACTH in a Private Clinic

Marcus A. Krupp, M.D., Milton Saier, M.D., Frances Keddie, M.D.,
Ralph Tanner, M.D., and A. M. Snell, M.D., *Palo Alto*

SUMMARY

Cortisone and ACTH are valuable agents for treating a large variety of diseases. In appropriate situations they may save life. It may be possible to prevent loss of vision in eye disease or permanent damage to important viscera in generalized disease. With ready access to these agents through the pharmacist, it is important to know that cortisone and ACTH can be used in office practice provided patients are selected carefully and followed frequently and closely. Strict observation of criteria for selection of patients limited the size of the series of patients reported upon, but by the same token the incidence of complications from therapy was exceptionally small. Every physician who elects to employ these potent hormones must become familiar with their physiological effects and with the various methods of exhibiting them. Some of these effects are noted in this paper, but the experiences reviewed here provide an incomplete picture of the wide application of cortisone and ACTH.

EVERYONE is familiar with the discovery of the therapeutic effects of adrenocorticotropic hormone (ACTH) and of cortisone by Hench and coworkers.[3] Two years of clinical application of these hormones can be summarized in a general way:

1. These agents can provide palliation of uncomfortable and damaging effects of many non-endocrine diseases. The basis for the action of these drugs in such diseases appears to be pharmacodynamic rather than humoral.

2. In a disease of brief duration, such as certain drug sensitivity reactions or an isolated attack of uveitis or of rheumatic fever, the clinical manifestations can often be subdued until the process has run its course and therapy can be stopped safely.

3. Undesirable physiologic effects of large doses of adrenal steroids often appear, and, therefore, the problem of prolonged therapy may become extremely complicated. In many instances, however, doses of either hormone sufficient to provide a desirable therapeutic effect produce no undesirable effects, and prolonged therapy is possible.

4. Upon withdrawal of the drugs, clinical manifestations of chronic active disease return, usually with intensity comparable to that preceding therapy. Fortunately, undesirable "toxic" responses regress or disappear upon cessation of therapy.

5. Specific contraindications to use of these agents have been delineated.

For a little more than a year both ACTH and cortisone have been used by the authors in treating a series of carefully selected patients with a variety of diseases (Table 1).

Patients with acute, serious illness of brief duration were treated after only preliminary investigation for possible contraindications to therapy. Patients with chronic disease or diseases for which therapy was to be on a trial basis were carefully screened for presence of renal or cardiac insufficiency, hypertension, diabetes, mental disease, active tuberculosis, and history of peptic ulcer. The occurrence of any of these during therapy was watched for with great care in the clinic and in the laboratory. To prevent undesirable retention of large amounts of sodium and water, diets containing 2

Table 1.—*Data on Patients Treated with Cortisone and with ACTH in the Period April 1950 to April 1951*

Disease	Result: Success	Result: Failure	Treated at: Hospital	Treated at: Office, Home
Treated with Cortisone				
Rheumatoid arthritis	11	0	2	9
Rheumatic fever	1	0	1	0
Acute bursitis	3	0	0	3
Calcific bursitis, chronic	0	1	0	1
Gout, acute	1	0	0	1
Chronic	1	0	0	1
Asthma	4	4*	4	8
Atopic dermatitis	3	0	0	3
Drug sensitivity reactions	5	0	5	0
Eye disease:				
Uveitis (including post-traumatic)	13	2	2	13
Keratitis	4	2	0	6
Optic neuritis (all types)	3	3	5	5
Thyroiditis, acute	1	0	0	1
Pulmonary beryllosis	1	0	0	1
Treated with ACTH				
Intramuscular administration:				
Asthma, acute status	2	0	2	0
†Collagen disease	1	0	1	0
Chronic ulcerative colitis	1	0	1	0
Pulmonary beryllosis	1	0	0	1
Gout	1	1	0	2
Pericarditis, tuberculous	0	1	1	0
Psoriasis with arthritis	1	0	0	1
Intravenous administration:				
Asthma, acute status	3	0	2	2
Discoid lupus erythematosus	1	0	0	1
Chronic hepatitis in acute exacerbation	1	0	1	0
†Collagen disease	1	0	1	0

* Improved initially, but had relapse while on treatment.
† Same patient.

Presented as part of a symposium on Cortisone and ACTH before the Sections on General Medicine and General Practice at the 80th Annual Meeting of the California Medical Association, May 13-16, 1951, Los Angeles.

gm. or less of sodium chloride were prescribed. Potassium citrate in doses of 3 to 9 gm. (25 to 75 mEq.) a day was given to maintain potassium balance and to prevent, if possible, unusual nitrogen loss. Eosinophil counts were done periodically during the use of both hormones; although found useful in judging therapy with ACTH, they were abandoned in cortisone-treated patients.

TREATMENT WITH CORTISONE

During the first three months cortisone was used in the work here reported, it was given intramuscularly, usually in doses of 200 to 300 mg. the first day or two, and 100 mg. daily thereafter. From July 1950, the suspension was given orally to all patients who could accept oral therapy, first in syrup and later, when available, in tablet form. The daily oral dose was divided into four or three doses given at five-hour to eight-hour intervals during the waking hours. Oral doses of cortisone usually totalled 200 mg. the first day, followed by 100 mg. daily thereafter until the desired clinical effect was assured. The daily dose was then reduced by 12.5 mg., maintained at the new level for several days, then reduced another 12.5 mg. and so on until the minimal effective dose was ascertained. Rarely a patient would require more than 100 mg. daily to produce a therapeutic effect. In no instance was it necessary to use more than 150 mg. daily, although it is recognized that larger doses may be required for some patients. Doses of 75 to 100 mg. were usually necessary to control clinical manifestations of disease; only one patient with chronic gout required less. Withdrawal of cortisone after three to four weeks of therapy was accomplished by diminishing the dose by 25 mg. every three to four days. With this schedule of therapy no signs of post-cortisone adrenocortical hypofunction were noted.

Rheumatoid Arthritis: The experience with cortisone in this disease was similar to that recorded elsewhere. Eleven patients were treated with doses of 75 to 100 mg. daily for over four months with no evidence of "toxicity" or of development of adrenal atrophy. Two patients did not benefit sufficiently to warrant continuous therapy. In one case mild hypertension developed, and when edema also developed despite careful salt restriction, use of the drug was discontinued.

Rheumatic Fever: One patient, a girl aged 11 with acute rheumatic fever and carditis, was treated with cortisone. Within the first 24 hours, while receiving 200 mg. of cortisone orally, she became afebrile, an aortic diastolic murmur disappeared, and the electrocardiogram returned to normal. An apical diastolic murmur was unchanged. The patient received 100 mg. daily for four days, then 87.5 mg. for four days and finally 75 mg. daily for a total of 28 days followed by gradual reduction of dose without recurrence of acute disease. It is too early to assess the effect of the drug on development of valvular disease. For this patient rheumatic fever was, for the most part, an asymptomatic rest in bed.

Acute Bursitis: On the suggestion of Engleman,[1] cortisone was used to treat one case each of acute subdeltoid bursitis, tennis elbow and subgluteal bursitis. A total dose of 1 gm. (200 mg. the first day, followed by 100 mg. a day for eight days) provided early remission of pain and return of motion in three patients. In a fourth patient with chronic calcific subdeltoid bursitis, treatment was unsuccessful.

Gout: One patient, aged 64, with chronic tophaceous gout of many years' duration was treated with cortisone, 50 mg. daily for 42 days, with complete relief. At last report he had been without therapy of any kind for eight weeks and remained well. Deformity from tophi and damaged joints was not altered, but the patient recovered from a totally disabled state to the point where he could attend his office and play golf. A second patient was treated for an acute, severe attack of gout that was unaltered by colchicine. He was given 200 mg. daily the first three days, followed by 150 mg. daily for five days with complete recovery. Colchicine, 0.6 mg. four times daily, was added after relief from cortisone had been obtained. A recurrence a month later was treated with ACTH.

Asthma: Eight patients with severe, chronic asthma were treated either for acute, threatening attacks of asthma or for chronic respiratory embarrassment that would not yield to proper conventional treatment even in the hospital. Four had fair response to cortisone in doses of 100 to 150 mg. per day, but received no benefit from smaller doses; treatment was abandoned in these patients. The other four responded remarkably well and have received intermittent therapy since then. One of them has had remissions of four to six weeks after each course of treatment, in contrast to a previous state of continuous asthma. Cortisone certainly is of value in the treatment of asthma, but failures are common and the problems of continuous therapy always present.

Atopic Dermatitis: Three patients with atopic dermatitis were treated for periods of two to six weeks with rapid and complete clearing of skin lesions. All had relapse within a few weeks after therapy was stopped, but in each case the relapse was not so severe as the previous disease.

Drug Sensitization: Four patients with serious sensitivity reactions to penicillin and one with a reaction to streptomycin received cortisone orally. All responded rapidly to an initial dose of 200 mg. the first day followed by 100 mg. daily for seven to ten days. Fever, exfoliation, erythema bullosum-like lesions, and edema cleared within 48 hours. The usually severe "toxic" course of such reactions can be reduced to a mild reaction that allows for rapid recovery once the offending agent has been removed or excreted.

Eye Disease: Twenty-seven patients were treated (Table 2). Fifteen of them had uveal tract disease (chorioiditis or iritis), and four of the patients in this group were treated only with eye drops of cortisone suspension in a concentration of either 2.5

per cent or 0.8 per cent. The drops were instilled hourly during waking hours for the first seven to 14 days, after which the interval was lengthened periodically until a maximum of four times a day was reached. At night an ophthalmic ointment (2.5 per cent cortisone) was used. Three of the four patients improved remarkably; one, only slightly. With cessation of therapy there was recurrence of clinical evidence of disease in three patients, but resumption of treatment controlled inflammatory signs until the disease had run its course and treatment could be stopped. In the ordinary case, three to six weeks of treatment was required. Local therapy alone may often induce rapid disappearance of keratitic precipitate, of vascular engorgement, of vitreous opacities and even of chorioidal lesions. Five patients not suited for oral treatment or local instillation of drops were given 0.5 cc. of the standard suspension of cortisone subconjunctivally every two to three weeks for three doses with rapid healing of acute, severe chorioiditis. Two patients with acute chorioiditis had prompt healing with use

TABLE 2.—*Treatment of Diseases of the Eye with Cortisone*

Diagnosis	Dose and Method of Administration	Response
Iridocyclitis, acute, bilateral	Intramuscular 2.1 gm. in 10 days	Rapid cure
Iridocyclitis, chronic, bilateral with rheumatoid arthritis	Oral 100 mg. daily continuously	Rapid improvement while on treatment
Chorioiditis, chronic, severe, 1 yr.	Intramuscular 100 mg. daily, 2 mo.; 300 mg. weekly 1 mo.	Marked improvement (cure?); all other treatment failed
Chorioiditis, chronic, severe	Intramuscular 100 mg. to 150 mg. daily	Exacerbation on 150 mg.; treatment stopped
Uveitis, chronic, with secondary glaucoma	Subconjunctival 0.5 cc. (12.5 mg.) every 3 wk. three times	Remarkable improvement; well with no treatment, 4 mo.
Chorioiditis, acute, severe	Subconjunctival 0.5 cc. (12.5 mg.) every 3 wk. three times	Remarkable improvement; healed 6 wk.
Iridocyclitis, post-traumatic	Subconjunctival 0.5 cc. twice	Cleared very rapidly
Iridocyclitis, post-traumatic	Subconjunctival 0.5 cc.	Rapid clearing of lesion
Vitreous hemorrhage, postoperative, 8 wk. duration	Subconjunctival 0.5 cc.; given deep, episcleral	Pronounced clearing in 5 days
Glaucoma, acute, secondary to iridocyclitis. (Due to histoplasmosis sensitivity?)	Eye drops (2.5%) every hr.; subconjunctival 0.5 cc.	Prompt and complete reversal of disease
Chorioiditis, acute, recurrent	Eye drops (2.5%) every hr.; subconjunctival 0.5 cc. every 2 wk. 4 times.	Slow, steady improvement; almost healed
Iridocyclitis, post-traumatic	Eye drops (2.5%) every hr.	Rapid recovery
Iridocyclitis, acute	Eye drops (0.8%) every hr.	Moderately good result
Iridocyclitis and keratitis, post herpes zoster	Eye drops (2.5%) every hr.	Good response with healing
Iridocyclitis, recurrent	Eye drops (0.8%) every hr.	Fair to no effect
Keratitis, severe (etiol?)	Eye drops (2.5%) every hr. for 3 wk.	Good response; little or no scar
Keratitis, bilateral, allergic	Eye drops (2.5%) every hr.; ointment (2.5%) at night	Excellent response
Keratitis, recurrent, (etiol?)	Eye drops (0.8%) every hr.	Rapid improvement
Keratitis, postoperative	Eye drops (2.5%) every hr.	Fair response, healing incomplete
Keratitis, dendritic, acute	Eye drops (2.5%) every 2 hr.; subconjunctival 0.5 cc. weekly	Symptomatic improvement; slow healing
Conjunctivitis, chronic; keratitis sicca, healed	Eye drops (0.8%)	Subjective improvement
Retrobulbar neuritis, acute	Intramuscular or oral 100 mg. daily for 20 days	Rapid improvement to 20/20 vision
Retrobulbar neuritis	Intramuscular 300 mg. daily for 2 days; 100 mg. daily for 14 days	Slow improvement to normal vision
Optic neuritis and neuroretinitis, bilateral, severe	Oral 100 mg. daily	Rapid improvement in 4 days; had not improved in 10 days prior to treatment
Retrobulbar neuritis	Oral 100 mg. daily for 14 days	Failure
Optic neuritis and papillitis, severe	Oral 100 mg. daily for 28 days; subconjunctival 12.5 mg.	Failure
Optic neuritis, acute; tenosynovitis, external rectus	Oral 100 mg. daily for 21 days; eye drops (2.5%) every hr.; ACTH 20 mg. intravenously daily for 3 days after cortisone treatment	Failure to all therapy; ACTH inadequate

of eye drops and subconjunctival injection. Of four patients treated with cortisone orally or intramuscularly in conventional manner, three had excellent response and one had recurrence of disease while still receiving the hormone.

Four patients with keratitis were treated successfully with cortisone eye drops; two others had little or no improvement on local or subconjunctival therapy.

Six patients received cortisone orally or intramuscularly for optic neuritis or retrobulbar neuritis. Only three improved while on cortisone; the other three were not helped.

Thyroiditis: A 52-year-old female with acute thyroiditis of two weeks' duration was given cortisone, 100 mg. daily for 10 days. After 36 hours of treatment the gland, which had been enlarged and very tender, was no longer painful and the temperature became normal. The thyroid gland diminished only slightly in size, but became firm. No complication such as dysthyroidism or dysphagia developed.

GENERAL OBSERVATIONS

Nineteen patients acutely ill with drug sensitivity reactions, severe rheumatoid arthritis, serious eye disease, and status asthmaticus were started on treatment in the hospital only because their condition was serious enough to justify hospitalization. Therapy was initiated in the office or home on an ambulatory basis in 27 patients treated with cortisone orally or parenterally, and in 17 patients with ophthalmic disease treated by local application of cortisone suspension. Patients were observed daily during the initial week of therapy and at less frequent intervals as treatment was prolonged. All patients were observed at least once a week for check on mental state, weight, blood pressure and glucose in the urine.

Treatment had to be stopped in only two cases because of undesirable reactions. In one case hyperglycemia with glycosuria and acetonuria developed. As cortisone had provided only minimal relief from asthma, cessation of therapy was acceptable to the patient. Acute rise of blood pressure to serious hypertensive levels prompted cessation of therapy in a patient with rheumatoid arthritis.

In one patient with rheumatoid arthritis and a decrease in glucose tolerance determined prior to treatment, mild hyperglycemia and persistent 1 to 2 plus glycosuria developed during maintenance on 100 mg. cortisone daily. At last report the patient had been under treatment for four months with satisfactory improvement in arthritis and no advance of the "steroid diabetes."

TREATMENT WITH ACTH

Because ACTH must be administered parenterally, only a few patients were treated with it prior to a few months ago. The basis for selection of patients was identical to that for cortisone therapy.

Diagnostic test for adrenal function: Eight patients were tested according to the method of Thorn, with a decrease in eosinophils in the blood the sole criterion. Often, the recommended dose of 25 mg. of ACTH intramuscularly did not produce a 50 per cent decrease in eosinophils in normal persons; a dose of 40 to 50 mg. was required.

Asthma: Two patients with status asthmaticus responded favorably within six to 12 hours to ACTH, 25 mg. intramuscularly every six hours. Therapy was stopped when the acute attack had completely subsided, usually in four to seven days.

Pericarditis: A 22-year-old student was treated for what was thought to be rheumatic fever with pericarditis. He received 25 mg. of ACTH intramuscularly every six hours. Fever disappeared, tachycardia diminished, but the pericardial rub persisted. Pericardiocentesis was done and sanguinous fluid was withdrawn. No organisms were grown on culture of the fluid. After five days fever returned and it was then concluded that the most likely etiologic factor was M. tuberculosis. ACTH was stopped and appropriate therapy instituted. There is no evidence that this brief exposure to ACTH was harmful; of interest was the rapid alleviation of pain, fever and tachycardia with persistence of the active disease.

Pulmonary Beryllosis: A 36-year-old neon sign worker with chronic pulmonary granulomatosis resulting from working with beryllium was treated with ACTH, 100 mg. intramuscularly daily, with rapid decrease in dyspnea, moderate increases in vital capacity from 2,800 cc. to 3,600 cc., and increased capacity for exercise. Appetite improved and there was a gain of 16 pounds in body weight. While the patient was being maintained on 30 to 40 mg. daily for eight weeks, there was gradual reversion to the pretreatment state of pulmonary insufficiency. An increase in dose was not thought to be safe in this patient. He did poorly when without treatment. Cortisone, 100 mg. daily, produced satisfactory improvement—almost comparable to the best state while on ACTH. The patient was maintained on cortisone for three months without incident. Use of the drug was then discontinued and at the time of last report the patient had been more comfortable for three months than at any previous time when not being treated. It is planned to continue with ACTH or cortisone in courses interspersed with rest periods.

Gout: Two patients had relief from acute attacks of gout following a single dose of 50 mg. of ACTH intramuscularly. Both were treated with colchicine, 0.5 mg. three times daily, in the hope that recurrence would be prevented. Another patient had no response to one dose of ACTH, 50 mg. intramuscularly. At the time of this report he was being studied further with larger doses.

Chronic Ulcerative Colitis: A 38-year-old female was treated with ACTH after four months of severe, acute exacerbation of chronic ulcerative colitis. The dosage was at the rate of 100 mg. daily for two and one-half days, then 80 mg. daily for two days, and

60 mg. daily for two days. Each day's dose was divided into four equal doses given six hours apart. The patient became afebrile in 24 hours. Vomiting ceased and diarrhea improved. After completion of this brief course of therapy the patient had only six or seven defecations a day instead of the 20 to 30 a day previously. After ten days of relative well-being, relapse occurred. It was recognized that so brief a course of ACTH therapy would not insure a lasting remission, but continued administration was impossible for financial reasons. The prompt response to ACTH in this case indicates that this agent offers advantage in the treatment of devastating exacerbations of ulcerative colitis and of regional enteritis.

INTRAVENOUS ADMINISTRATION OF ACTH

Following Gordon's report[2] at the second ACTH Conference, ACTH was given intravenously to a selected group of patients.* It has been confirmed that ACTH can be given safely intravenously. Great therapeutic effect results from doses of 10 to 25 mg. dissolved in 5 per cent glucose and given over a period of four to 16 hours. The longer the time of the infusion, the greater the physiologic response on the part of the adrenal cortex; the effect of a dose given intravenously may be equal to a daily intramuscular dose five to ten times greater.[2, 4] It is of great importance to prevent potassium depletion in patients given the substance intravenously. In the present series 25 to 50 mEq. of potassium (3 to 6 gm. potassium citrate) was given daily to all patients who received ACTH intravenously.

Test for adrenal insufficiency: A patient with asthma who had received cortisone, 100 mg. daily for six weeks, followed by two months of conservative therapy, had a severe, unremitting attack of asthma. In a routine Thorn test there was no decrease in eosinophils. A test with ACTH, 25 mg. given intravenously as a drip for four hours, produced a change in eosinophil count from 1,430 per cu. mm. to 123 per cu. mm. six hours after start of the infusion. The patient received the hormone intravenously daily for three days with complete relief from the attack.

Asthma: Three patients with severe, acute attacks of asthma were treated with 10 to 25 mg. of ACTH intravenously daily or every other day for three to six doses with excellent results. Two were treated in the hospital. One patient was treated in the office with 25 mg. in 500 cc. of 5 per cent dextrose in water given over a three- to four-hour period every other day.

Discoid lupus erythmatosus: A 27-year-old woman was treated with ACTH, 10 mg. every other day, given intravenously with infusion taking three to four hours. The patient became afebrile, and the generalized skin lesions rapidly regressed. Seven doses were given without appearance of undesirable effects. Relapse occurred after cessation of therapy, and the patient was given 10 mg. three times weekly for another four doses with excellent results. At last report, five weeks later, there was no relapse.

Chronic hepatitis in acute exacerbation: A 35-year-old woman who had an acute bout of virus hepatitis in October 1950, had a relapse late in November. She improved slowly and by February 1951 was considered to be almost well. In March she again became jaundiced, and because of fever, anorexia, intense jaundice and a greatly enlarged liver (the lower margin at the iliac crest) was placed in the hospital. Results of laboratory studies were indicative of seriously impaired liver function. The patient was not improved after ten days of rest and usual care. ACTH. 10 mg. daily in 1,000 cc. of 5 per cent dextrose in water, given intravenously over 12 hours, was begun on a trial basis. Within 48 hours the patient was afebrile and eating heartily. After five doses, the drug was withheld for one day, and the patient again was ill, febrile (102° F.) and could not eat. Next day, after receiving 5 mg. of ACTH intravenously in six hours she was again afebrile and had begun to eat. The improvement, clinically and by liver function appraisal, was remarkable while the daily infusions of 10 mg. ACTH were continued. After a total of 23 days of treatment, ACTH was stopped. At last report, three weeks later, improvement was continuing. It is likely that ACTH so suppressed the toxic, febrile manifestations of hepatitis that the patient was able to eat and to effect some sort of hepatic protective mechanism more readily.

Collagen disease: A 71-year-old male successfully treated with cortisone had relapse when cortisone was withdrawn. Four weeks later, in April 1951, exacerbation of rheumatoid disease occurred. With this there developed extensive involvement of synovia, pleura, pericardium, and skin, associated with fever and extreme debility. ACTH was given, 100 mg. daily intramuscularly, with rapid improvement. Reduction of the dose to 60 mg. daily was followed by exacerbation of disease. The patient was given ACTH, 25 mg. daily intravenously, with rapid improvement. At last report he had been maintained on ACTH intravenously daily for ten days — the dose then was 20 mg. daily—and was much improved objectively and subjectively.

300 Homer Avenue.

* This work was done in collaboration with E. P. Engleman, M.D.

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Experience with ACTH and Cortisone in Private Practice

Albert Rowe, Jr., M.D., Gordon R. Lamb, M.D., Fletcher B. Taylor, M.D., and Laurance W. Kinsell, M.D., *Oakland*

SUMMARY

ACTH and cortisone are highly nonspecific in their action. A fundamental portion of the mechanism of action is the interposition of a blockade between toxin and end organ. This effect can be of great benefit in the management of a variety of acute and chronic diseases.

A major hazard constantly to be kept in mind is the potential masking of advancing disease. This consideration makes concomitant chemotherapy mandatory in the presence of specific infections.

In chronic diseased states it should be assumed that prolonged therapy will be necessary. Treatment should not be instituted unless such continued therapy is physiologically and economically feasible.

THE clinical use of adrenocorticotropic hormone (ACTH) and cortisone is still in the experimental stage. Thus far there is no evidence to show that any disease is cured by use of the hormones. These agents have been shown to have widespread application in treatment of allergic diseases, in certain infectious diseases, and in the poorly defined syndromes classified as "collagen diseases." In all these diseases the common denominator appears to be the establishment of a blockade between toxin and end organ.

ACTH and cortisone have been found to be most useful in Addison's disease (cortisone only), functional adrenocortical insufficiency, functional hypopituitarism, anorexia nervosa, idiopathic hypoglycemia, acute rheumatic fever, acute gouty arthritis, status asthmaticus, serum sickness, exfoliative dermatitis, Loeffler's syndrome, acute inflammatory diseases of the eye, burns and frost bite, poison ivy dermatitis, and allergic diseases in general. The agents may be useful in rheumatoid arthritis, psoriasis, disseminated lupus erythematosus, dermatomyositis, periarteritis nodosa, acquired hemolytic jaundice, vasomotor rhinitis, urticaria, multiple myeloma, the lymphomata, nephrotic syndrome, ulcerative colitis, regional enteritis, pulmonary beryllosis and in controlling the symptoms of drug addiction. They are of questionable value in mental disease, multiple sclerosis, pemphigus, scleroderma, myasthenia gravis, osteoarthritis, Paget's disease, thyrotoxicosis, malignant exophthalmos, glomerulonephritis, cancer and (cortisone only) hypertension.

Their use is contraindicated in the presence of diabetes mellitus, Cushing's syndrome, hypertension (ACTH), congestive heart failure, osteoporosis, acne, hirsutism, pathological fluid collection, tuberculosis, fresh wounds and gastric or duodenal ulcer. In certain circumstances, however, indications for administration of these hormones may exist despite such contraindications.

The mode of action of these hormones remains obscure. In general the cortical hormones like other hormonal agents regulate specific enzymatic activity, which may proceed in their absence. The hormones may remove circulating toxins by adsorption, may produce a blockade at the level of the cell membrane, or may directly protect enzymatic systems within the cell itself. It is felt by some investigators that by interposing a blockade between toxin and specific end organ a respite is afforded the organism and that such a respite may permit specific immune reactions to effect a cure as in the case of infectious diseases, or may help to initiate a prolonged remission as in asthma and some forms of leukemia. In order to effect a significant remission in certain chronic conditions in which these agents are effective, prolonged administration has been found necessary in a high percentage of cases.

Data on certain important considerations regarding comparative effects of the two drugs on both the adrenal cortex and the pituitary gland, the rate of absorption, and the incidence of foreign protein reactions, are given in Table 1.

ACTH is effective only by intramuscular or intravenous administration. If the intramuscular route

Table 1.—*Comparison of Effects of ACTH and Cortisone*

	ACTH (30 to 50 mg.)	Cortisone (100 mg.)
Effect on adrenal cortex	Stimulation	Inhibition
Effect on pituitary gland	Inhibition	Inhibition of ACTH secretion
Routes of administration:		
a. Oral	Ineffective	Potent
b. Intramuscular	Rapid and of short duration, 2 to 4 hr.	Slow (1 or 2 doses daily)
c. Intravenous	Rapid and prolonged	Contraindicated
Development of sensitivity	Occasional	Rare

From the medical service of the Samuel Merritt Hospital, Oakland.

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is used the total daily dose should be divided equally and administered at six-hour intervals to obtain the maximal therapeutic effect.

For intravenous use the most effective procedure is by continuous slow drip through the 24 hours. It appears probable that in the immediate future the intravenous route will be used for maximal immediate effect, and long-acting oily suspensions will be used for long-term maintenance therapy.

Cortisone may be administered either parenterally or orally. When used intramuscularly, doses may be given once or twice daily. In oral administration the material may be given at six-hour intervals.

The average initial daily dose of ACTH should be 80 to 100 mg. and of cortisone 300 mg. The average maintenance dose of ACTH is 30 to 50 mg., and of cortisone 50 to 100 mg.

At times it may be advisable to combine or alternate the hormones. Intermittent administration of one or both may result in the development of resistance. A gradual decrease in dosage is preferable to intermittent administration in most instances. Simultaneous administration of both or alternating ACTH and cortisone therapy sometimes is more effective than giving one or the other alone. Rest periods are indicated when cortisone alone is used, because of possible adrenocortical atrophy. Such rest periods permit resumption of adrenocortical activity which may have become depressed during cortisone administration. These rest periods should not be less than four to six weeks. A full course of treatment should cover two to six weeks and the total dosage of cortisone should not exceed 3 to 4 gm. Simultaneous administration of desiccated thyroid may be necessary for some patients undergoing prolonged therapy, because of possible inhibition of thyroid-stimulating hormone.

COMPLICATIONS

Hypertension, hyperglycemia, fluid retention and psychosis are the most common complications encountered. Muscle weakness as a result of potassium deficiency may occur. With few exceptions, these complications are reversible by reduction of dosage or cessation of therapy. Concomitant testosterone therapy helps negate the effect of increased tissue catabolism.

CLINICAL AND LABORATORY PROCEDURES DURING THERAPY

Total circulating eosinophil counts should be obtained at from one-day to four-day intervals to make sure that an adequate initial decrease occurs. Subsequent rises in total circulating eosinophils are of no consequence. If clinical improvement does not accompany the decrease in total circulating eosinophils, the dosage should be increased temporarily. A record of the daily fluctuation in the body weight of the patient should be kept in order that accumulation of edematous fluid may be detected if it occurs.

Frequent determination of blood pressure is essential early in the course of therapy. After maintenance doses have been established, less frequent observations of blood pressure may be made.

Blood sugar determinations should be carried out at bi-weekly intervals until maintenance dosage has been established, and less frequently thereafter.

Observations for clinical signs of masculinization, particularly in women, are of great importance. Signs of muscle weakness should be looked for as an indication of possible potassium deficiency. With prolonged use of either hormone, simultaneous administration of testosterone is desirable because the catabolic effects of both ACTH and cortisone can be blocked by testosterone preparations without interfering with the therapeutic effect of either hormone. Significant alterations in psyche should be watched for carefully. When either hormone is used as an adjunct in the treatment of specific infectious states, actual or potential, adequate chemotherapy is mandatory.

RHEUMATOID ARTHRITIS

Other observers[1, 2, 3, 6] have reported that in every case rheumatoid arthritis can be ameliorated to some degree with ACTH or cortisone. The authors' experience in ten cases gives further evidence to support this view. All the patients were found to require continued therapy. With cessation of treatment short remissions of varying duration occurred; also, temporary exacerbations were observed immediately after cessation of therapy.

Most patients received either ACTH or cortisone alone. The average initial dose of ACTH was 100 mg. daily, and of cortisone 300 mg. daily. The average daily maintenance dose of ACTH varied from 20 mg. daily for some patients to 40 mg. daily for others; for cortisone the average was from 50 to 100 mg. daily. Some patients received these agents alternately and some received them concomitantly. Certain theoretical advantages may result from giving both drugs together or alternately.

At the time of this report, cortisone had become difficult to obtain for patients not critically ill and for this reason maintenance therapy was stopped in some cases. Several of the patients had severe recurrences of symptoms and psychologic changes which were definitely detrimental. The psychologic trauma so induced was a major problem in several instances. It is concluded, therefore, that therapy with these agents in rheumatoid arthritis should not be instituted unless reasonable assurance exists that maintenance therapy can be continued for indefinite and prolonged periods, both from the medical and economic standpoints.

ALLERGIC DISEASES

Asthma. In bronchial asthma these agents were of most value in the treatment of status asthmaticus. Indeed, in some cases use of the hormones was probably life-saving. They were also of definite value in epinephrine-fast and aminophyllin-fast patients,

and helped in producing remissions in long-standing cases resistant to other forms of therapy. The duration of relief varied; usually it was only temporary for patients who had had the disease for a long time.

In some patients with seasonal pollinosis, adequate courses of therapy induced remissions for an entire season. Two patients in this series had severe complicating pulmonary emphysema. Symptoms related to the emphysema did not improve under maximal therapy. Average doses for patients with bronchial asthma approximated those used in rheumatoid arthritis.

Atopic Dermatitis. As in bronchial asthma, both ACTH and cortisone were useful in alleviating symptoms of atopic dermatitis. Indications for use of the agents include resistance to conventional therapy, severe exacerbation, and anticipation of a prolonged period of disability. In the latter circumstances the agents may be given in hope of inducing early remission.

In several cases acceleration of eczema was observed after therapy was stopped. With parenteral administration of these agents in patients with atopic dermatitis, deep abscesses have been produced despite meticulous efforts to sterilize the skin prior to injection. It is believed that such abscesses result from deep-seated chronic infection of the skin.

Urticaria, serum sickness and drug sensitivity. In urticaria, serum sickness, and for control of symptoms of drug sensitivity, short courses of relatively low dosage were dramatically effective. It is the authors' belief that drug reactions constitute one of the prime indications for employment of these substances. It has also been observed that when strong psychogenic factors were present and possibly contributory in the production of urticaria, resistance to treatment was more pronounced.

Contact Dermatitis. Two patients with poison oak dermatitis experienced prompt and dramatic relief, one with ACTH alone, the other with cortisone. In the patient treated with ACTH, dermatitis was complicated by hypertension and acute nephritis, both of which disappeared within four days after institution of therapy and did not recur.

Vasomotor Rhinitis. Two patients were treated. Response was poor in both cases.

MISCELLANEOUS SKIN DISEASES

In treatment of miscellaneous skin diseases, the most dramatic response was observed in a single case of pemphigus. At the time of institution of treatment the patient had been hospitalized for several months, had been found resistant to many forms of therapy, and was near death. ACTH was used initially. Adequate doses produced prompt relief of symptoms. After three months of therapy ACTH was discontinued with resulting severe exacerbation. On resumption of ACTH therapy, it was found that the patient had become resistant to hog ACTH and to cortisone. However, the use of beef ACTH gave excellent results. After a short period ACTH was discontinued and cortisone substituted. Later ACTH in oil was used in place of cortisone. A year after the institution of therapy, the patient was entirely asymptomatic with small daily doses of cortisone.

In a case of scleroderma, moderate improvement in the skin lesions was observed. In this case a severe psychotic reaction necessitated discontinuance of therapy. One patient with dermatomyositis was treated with ACTH with partial relief of pain and partial clearing of skin lesions. During therapy a previously suspected peptic ulcer perforated, but in view of atypical symptoms, operation was delayed approximately 18 hours. The effect of ACTH in masking symptoms was considered a major factor in delay in diagnosis. Upon exploration, perforation of a duodenal ulcer was observed and there was extensive peritonitis.

Two cases of psoriasis were treated, one with ACTH and cortisone concomitantly, the other with cortisone alone. Both patients had dramatic and prompt relief of symptoms and dramatic reduction in severity of skin lesions but continuous treatment was necessary.

BURNS

Two patients with severe burns were treated. One patient with second and third degree burns involving approximately 50 per cent of the body surface was given ACTH and cortisone in small doses over a six-day period. The patient lived. In the second case, second and third degree burns involved 65 per cent of the body surface. ACTH and cortisone were also employed in small doses over a four-day period. The patient died of pulmonary edema on the sixth day.

DEMEROL ADDICTION

Both agents were highly effective in the control of withdrawal symptoms due to Demerol® addiction in three cases. Symptoms were relieved within 24 hours after therapy was begun. Full doses were employed over periods averaging ten days. At last report two of the patients had remained symptom-free for over two months. The third patient, who had been taking 1,200 to 2,000 mg. of Demerol daily, stopped use of the drug within 24 hours after institution of ACTH therapy. Some three months later the patient was being given 40 mg. of ACTH daily and there were no withdrawal symptoms.

LYMPHOMA

One case of monocytic leukemia, one of chronic lymphatic leukemia, and two of Hodgkin's disease were treated.

The patient with monocytic leukemia had relief of symptoms (as previously reported[5]) and peripheral blood and bone marrow remained normal for almost six months. However, with reappearance of abnormal cells in the peripheral blood and bone marrow, large doses of ACTH were resumed. Death occurred from spontaneous rupture of the spleen nine months after institution of therapy.

Full doses of ACTH and cortisone over a ten-week period were of no benefit in a case of chronic lymphatic leukemia.

Seven days of ACTH therapy in full doses was of no benefit in a terminal aggravation of Hodgkin's disease in one patient.

REGIONAL ILEITIS AND ULCERATIVE COLITIS

In one case of long-standing regional ileitis, full doses of cortisone brought about prompt and dramatic relief of symptoms within a three- to four-day period. At last report the patient had been free of symptoms for four months with a total daily maintenance dose of 37.5 mg. Reduction of the dose below that level resulted in return of abdominal discomfort. One patient with ulcerative colitis treated with average daily maintenance doses of cortisone was not benefited. Another patient with ulcerative colitis of long standing received ACTH during an exacerbation with definite and dramatic shortening of the period of exacerbation in comparison with previous episodes.

HYPOGLYCEMIA

Two patients with hypoglycemia were treated. One had excellent response with the continuous use of cortisone over a five-month period. With the use of ACTH and cortisone concomitantly for one month a good immediate but poor late response was obtained by the second patient.

GOUTY ARTHRITIS

One patient with gouty arthritis had good response with the intermittent use of ACTH and cortisone over a four-month period.

ACUTE INFLAMMATORY DISEASE OF THE EYE

A patient with acute iridocyclitis was treated with ACTH over a seven-day period. The result was excellent and there was no recurrence.

ACUTE (NON-SUPPURATIVE) THYROIDITIS WITH EXOPHTHALMOS

A patient with acute thyroiditis and exophthalmos was treated intermittently for a period of one year with ACTH and cortisone with good immediate but only fair late response.

MULTIPLE MYELOMA

One patient with multiple myeloma was treated for eight weeks with ACTH with no appreciable benefit.

2940 Summit Street.

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Use of the Rocking Bed to Augment Ventilation in Patients with Poliomyelitis

Clarence W. Dail, M.D., Elizabeth Austin, M.D., O. L. Huddleston, M.D., Ph.D., and Albert G. Bower, M.D., *Los Angeles*

SUMMARY

As the first step in an attempt to clarify criteria for use of the rocking bed rather than the respirator as an aid to breathing for patients with weakness of respiratory muscle function caused by poliomyelitis, ventilation studies were done on seven patients with pronounced weakness or paralysis of the respiratory muscles. Average tidal air volume was considerably less when the patient was on the rocking bed than when he was in the respirator. Since the tidal air volume with the patient on the rocking bed represents the maximum that can be produced with the apparatus, whereas the volume in the respirator represents the patient's usual tidal air and the respirator is capable of a greater volume if necessary, it is apparent that in cases of complete paralysis of the respiratory muscles the respirator has a large margin of safety, the rocking bed none.

From clinical observations made on 51 patients who were put upon the rocking bed—23 of them early in the course of the disease and 28 after they had been ill three months or more—it was concluded that the rocking bed is contraindicated for patients who are febrile and in whom the disease is progressing rapidly, and for those with atelectasis or urinary or pulmonary infection. It must be used with extreme care in the case of patients early in the course of the disease who are not tracheotomized, because of a tendency toward increased accumulation of mucus and the danger of atelectasis.

General guides were developed with regard to use of the rocking bed for patients with post-acute poliomyelitis, and somewhat different rules were drawn for use of the apparatus in cases in which there is a chronic respiratory problem.

The rocking bed will give artificial respiration in cases of respiratory weakness, but will not provide enough tidal air for the patient with paralysis of the muscles of respiration.

In 1932, Eve[3] reported the use of a rocking stretcher for resuscitation. The patient was tilted from head to foot about 30° each way at a rate corresponding to that of natural respiration. The artificial respiration thus produced was sufficient to overcome pronounced respiratory distress and inadequacy. Eve reported using this method in two cases. In one case the patient was a small girl with post-diphtheritic paralysis of the diaphragm, and respiration was maintained for two or three days until there was adequate return of function in the diaphragm. Since that time, Eve has advocated the tilting stretcher for use in resuscitation, especially of the drowned, with tilting ranges up to 45° each way. The method appears to be more effective[1, 4] than those of either Schaefer or Silvester.

Since Eve's report in 1932, the rocking principle has been used in the treatment of peripheral vascular diseases.[8] The rate of motion of the Sanders bed, as well as its tilt, is much less than is necessary to produce any appreciable ventilation.

From the Department of Physical Medicine and the Communicable Disease Unit, Los Angeles County Hospital; Rancho Los Amigos; School of Medicine University of Southern California and the College of Medical Evangelists.

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Recently Wright[9] and Lenarsky[6] have advocated the use of the rocking bed in poliomyelitis with complicating respiratory insufficiency to aid in ventilation as well as to improve circulation and muscle function. A visit by Dr. Wright to the Los Angeles County Hospital and to the Rancho Los Amigos in 1949 stimulated the authors' interest in the use of the rocking bed in poliomyelitis. It is the purpose of this report to describe experience and experiments with the apparatus and to give criteria for its use based upon knowledge of the deficiencies of respiration as observed in the large number of cases of this type in Los Angeles County during recent years. The report deals primarily with the problem of inadequacy of ventilation. It does not attempt to establish the effect of the bed on circulation and muscle function.

TIDAL VENTILATION MEASUREMENTS

The effect of the rocking bed on breathing depends on the shifting of the abdominal contents that results from alternately lowering and raising the head of the patient. This shifting rhythmically elevates and depresses the diaphragm and consequently causes an appreciable tidal exchange of air. The effectiveness of respiration thus produced can be

evaluated by measuring the tidal air volume. It is probably impossible to measure this volume in the subject while he is awake or even during narcosis as long as the respiratory center can have any effect on breathing. The importance of this factor has been emphasized by Henderson.[5] To overcome this, Macintosh and Mushin[7] rocked two deeply narcotized subjects while spirometric measurements were made. One of the subjects was 140 pounds and the other 182 pounds in weight. With a tilt of 30° each way, a total of 60°, and a rate of 10 per minute, the tidal air values were 240 cc. for the smaller patient and 570 cc. for the larger. With a tilt of 45° each way, a total of 90°, the values were 380 and 635 cc. respectively. It should be remembered that the subjects did not assist or hinder breathing.

To better evaluate the ventilatory capacity of the rocking bed, it was decided to make spirometric measurements on patients with practically complete paralysis of the muscles of breathing. It was felt that this study would give further information about the properties of the beds available for clinical use, not just for the normal subject, but for patients of the type for whom the bed is intended. It is hoped that the results of these determinations and the clinical observations in the therapeutic use of the bed will lead to practical criteria for the safe use of the rocking bed in ventilatory deficiency.

Two types of rocking beds were employed in this study. They consist essentially of the usual Gatch type springs mounted on a mechanism to produce rocking from head to foot at a rate corresponding to respiration. One type* pivots at the top and center of the mattress, a mechanism made possible by a special tracking design. The speed and degree of tilting are adjusted by remote control on a separate panel. The tilt may be varied from 0 to 22° each way, a total of 44°, and the speed to about 24 oscillations per minute. This is the type of bed used by Dr. Wright.

The other bed† has a compound pivot so that besides rocking from head to foot there is also a lurch which appears to contribute to its action. The rate of oscillations can be varied from 12 to 24 per minute. The total tilt is about 35°, but the effect on respiration is about the same as that of the McKesson bed because of the compound action. The total tilt can be varied but slightly; however, the relative dip of head or foot can be varied. The Painter bed is mechanically controlled and is a single unit.

Spirometric measurements were done with a commercial metabolism apparatus‡ which was converted by removal of the unidirectional air valves and the insertion of a ventilating fan in the closed air circuit. A few readings were done with a spirometer§ modified to make tidal air determinations.

Nine tidal ventilation readings were done on seven patients who were practically completely paralyzed, but who had been well otherwise and whose condition had been unchanged for many weeks. Two patients had zero vital capacity, one 30 cc., one 40 cc., and the other three about 100 cc. The meager ability of some of these patients to breathe depended on action of the accessory muscles in the neck, a factor which could be easily watched and discounted during testing. The tidal air was measured while the patient was in the respirator which was set at the pressure used for the patient day and night. It should be observed that these readings indicated fairly closely the need of the patient, since any prolonged excess or inadequacy of respiratory volume would be reflected clinically. Comparison of these volumes with those produced by the rocking bed would aid in the evaluation of the adequacy of ventilation by the rocking bed. Most of the patients were given intermittent positive pressure artificial respiration while being transferred from the respirator to the bed and until the bed was actually rocking.

The accompanying Table 1 shows the results of the spirometric tests on the paralyzed patients. Tests No. 1 and No. 2 (Table 1) were done on the same patient to compare the Painter and McKesson beds. The same rate was employed, the head Gatch attachment was elevated 8 inches in each case, and the knees rolled up the same distance. The McKesson bed was tilted to its maximum. The Painter bed was adjusted to tilt the same at the foot and head. Test No. 4 was done on an experimental model of the Painter bed. On this bed the patient lay entirely flat. Comparison of the results in tests 1, 2, 4, and 5 indicated that the two beds produced almost equal ventilation.

It should be noted that in no case did the rocking bed produce as much ventilation as the patient had been getting in the respirator. It is significant that about half of the subjects could not tolerate the bed for more than a few minutes. The average of tidal air in those cases was about 54 per cent of what the patients had been getting in the respirator, whereas those who did not complain of air hunger averaged 77 per cent of the respirator tidal air. The average tidal respiration in the respirator was considerably more than the average tidal air that the rocking bed could produce in this series—383 cc. as compared with 251 cc. These findings are in line with those of Macintosh and Mushin, cited previously, but it should be remembered that the tilt used in the present study was 20° as against 30° and 45° used by Macintosh and Mushin.

To effectively produce sufficient ventilation, the rocking bed should have a tilt of at least 20° each way, 40° total. Greater tilt may be advisable, but the patient tends to slide too much. The supine position seems the most practical for the patient who has impaired breathing due to muscle weakness, but Macintosh and Mushin made the interesting observation that 25 to 50 per cent greater ventilation was

* Respir-aid Rocking Bed, McKesson Appliance Company, Toledo, Ohio.

† Painter Rocking Bed, M. D. (Jack) Painter, manufacturer, 640 South Washington Avenue, Whittier, California.

‡ McKesson Basal Metabalor, McKesson Appliance Co., Toledo, Ohio.

§ The Collins Vitalometer, Warren E. Collins, Boston.

TABLE 1.—*The Ventilatory Capacity of the Rocking Bed*

Test No.	Case No.	Sex	Age	Vital Capacity (cc.)	Tidal Air (cc.) Respirator	Tidal Air (cc.) Rocking Bed	Make of Bed	Reaction to test
1	2	F	23	100	270	200	Painter	Well tolerated
2	2	F	23	100	270	180	McKesson	Well tolerated
3	9	F	35	0	410	160	McKesson	Air hunger in 3 minutes
4	16	M	25	100	390	330	Painter	Well tolerated
5	16	M	25	100	350	300	McKesson	Nausea developed
6	17	M	22	100	470	210	McKesson	Air hunger in 1 minute
7	18	M	35	0	350	250	McKesson	Well tolerated
8	27	M	26	30	500	400	McKesson	Air hunger in 1 minute
9	28	F	27	40	440	230	McKesson	Air hunger after 1 minute
Averages:				63	383	251		

produced on the rocking bed with the patient prone.

The bed frame should be of the Gatch type. The back rest should be rolled up, about 8 inches, the knees about 4 inches. The feet should be snug against the foot-board, and it may be advisable to use shoulder supports. It may also be necessary to support the knees with a strap so that they do not flex as the patient is rocked.

It may be desirable to start the bed rocking in small arcs and then rather quickly increase the degree of tilt to the maximum. The rate of the bed ranges from 14 to 20 per minute for an adult, depending upon the natural rate of the patient's respiration; 18 to 24 per minute for children depending upon age and natural rate of respiration. Frequently, however, the patient's natural respiratory rate is considerably faster than the optimal rate for respiration by artificial means, including the rocking bed.

The time on the bed should be gradually increased from day to day while the patient is observed for any ill effects, especially increase in mucus, chronic fatigue and drop in vital capacity.

Although the ordinary nursing procedures can be done with the bed in motion, it is more convenient to stop it for short periods if tolerated. This also applies to physical therapy, although the rocking motion may help movement in some instances.

CLINICAL EXPERIENCES

At first the rocking bed seemed to offer good possibilities and use of it was begun with considerable enthusiasm. However, the original enthusiasm proved dangerous in some instances.

Altogether during the period of this study 51 patients were placed on the rocking bed. Of these, 23 were at the Los Angeles County Hospital and 28 were at Rancho Los Amigos. They were placed on the bed because it was thought the procedure would aid in reestablishing normal respiratory function. Because of the physical set-up at the Los Angeles County Hospital it was usually necessary to try to transfer the patient from the respirator to the rocking bed permanently. At Rancho Los Amigos, on the other hand, the patient could be transferred back and forth as needed. (The patients at Rancho Los Amigos included those for ventilation measurements already discussed.)

Use of the rocking bed in the County Hospital for the care of patients with acute poliomyelitis was begun on August 2, 1949. During the period of this study 23 patients ranging in age from 3 to 45 years were treated on it for varying periods of time: 14 were males, of whom three were children, and nine were females, one a child. These patients may be divided into an "early" and a "late" group. The early group was composed of six patients who were placed on the rocking bed before or very shortly after being placed in the respirator in the hope that the bed would give them sufficient assistance in breathing that the respirator would be unnecessary. The late group included 17 patients who were placed on the rocking bed ten days or more after being put in the respirator. In addition, three of the patients in the early group were again put on the rocking bed after they had been in the respirator for some time. They should therefore be considered as part of the late group, making a total of 20 in this group.

Of the six patients put on the bed early, only two escaped subsequent respirator care and these two might not have needed respirator care even without rocking bed assistance. One patient probably would have died had a respirator not been available and the three other patients did not do well while on the rocking bed.

When the rocking bed was used later in the disease with the patient afebrile, well stabilized and without complications, the time required to make him entirely independent of the respirator may have been slightly reduced in one-half of the 20 cases cited (see Table 2). However, eight of these patients were already spending three to six hours daily on a flat bed and one, No. 43, had almost full vital capacity before being placed on the bed, while another was spending 12 hours out of the respirator daily before the rocking bed regimen was inaugurated. Therefore, the time saved was probably minimal.

Three of the patients were placed on the rocking bed before ventilation studies were being made routinely. However, all had adequate exchange and good breathing patterns.

Five other patients had approximately one-third normal vital capacity or more. One, No. 46, was placed on the bed to drain a suppurative process in the chest.

On the other hand, five patients who were also afebrile and well stabilized did not improve while on the bed (Table 3) and consequently were returned to the respirators either just at night or around the clock, with subsequent increase in vital capacity.

Table 4 summarizes experience with six patients who were placed on the bed but in whom there developed complications which are described in case reports which follow. However, it is significant that two of the patients, Cases 31 and 36 (who, incidentally, did not do well on three occasions) had very low vital capacities. In two other cases, 32 and 35, increased mucus developed; in Case 35 this resulted in massive atelectasis and necessitated tracheotomy.

Of the 23 patients, ten complained of nausea on one or more occasions while on the rocking bed. This was apparently well controlled by Dramamine,® and only one patient was removed from the bed for this cause alone.

One patient delivered a fetus abortively, two required tracheotomy because of increased secretion of mucus, and one fell off the foot of the bed.

CASE STUDIES

A 25-year-old female patient (Case 29) was admitted on August 5, 1949, with a history of six days of illness with stiff neck, stiff back, fever and sore throat. Weakness of the right arm and shortness of breath had begun the day before admission. On admission it was noted the temperature was 100.4° F., the pulse rate 114, and respirations 40 per minute.

TABLE 2.—*Successful Use of Rocking Bed to Shorten Time of Transition from Respirator to Flat Bed*

Case	Sex	Age	Normal Vital Capacity (Calculated) (cc.)	Time Out of Respirator Before Put on Rocking Bed	Days Since Respirator Care Begun	Date	Time	Tidal Air (Bed) (cc.)	Vital Capacity at Rest (cc.)	Days on Bed	Reason for Removal
47	M	31	.....	20 min. thrice daily	18	.....	.....	Not recorded		7	Recovery
48	M	32	4,700	1 hr. twice daily	22	9-29-49	.....	300	900	6	Recovery
49	M	45	4,380	2 hr. thrice daily	64	12-28-49	.....	.....	1,650	12	Recovery
50	F	26	3,500	2 hr. thrice daily	36	10-12-49	.....	.....	1,150	8	Recovery
						10-20-49	.....	.....	1,400		
						10-26-49	.....	.....	2,600		
57	F	28	3,200	2 hr. thrice daily	16	10-21-49	.....	300	1,150	4	Recovery
						10-22-49	.....	300	1,690		
						10-25-49	.....	375	2,135		
						10-30-49	.....	.....	3,000		
40	M	11	.....	1 hr. thrice daily	14	.....	.....	No record		6	Recovery
30	M	31	.....	20 min. thrice daily	18	.....	.....	No record		7	Recovery
43	M	27	4,200	2 hr. thrice daily	10	3-30-50	9 a.m.	.....	3,150	1	Recovery
							3 p.m.	.....	3,150		
						3-31-50	1 p.m.	650	3,450		
							5 p.m.	650	3,600		
46	M	16	4,200	12 hr. daily		1-17-50	.....	.....	2,390	..	Recovery

TABLE 3.—*Unsuccessful Use of Rocking Bed to Shorten Time of Transition from Respirator to Flat Bed*

Case	Sex	Age	Normal Vital Capacity (Calculated) (cc.)	Time Out of Respirator Before Put on Rocking Bed	Days Since Respirator Care Begun	Date	Time	Tidal Air (Bed) (cc.)	Vital Capacity at Rest (cc.)	Days on Bed	Reason for Removal
37	F	29	3,300	4 hr. twice daily	14	11-11-49	.....	400	1,150	4	No increase in vital capacity. Respirator at night, flat bed during day.
38	F	19	3,200	5 hr.	30	12-10-49	.....	450	1,950	2	Vital capacity dropped to 1,700. Back in respirator except 5 hr. daily on bed.
39	M	22	4,900	3 hr. thrice daily	66	11-16-49	.....	400	1,025	21	Discharged in respirator. Needed respirator at night.
41	M	33	4,560	90 min. thrice daily	39	8- 8-50	8 a.m.	.....	2,050		Respirator at night.
							4 p.m.	.....	1,500		
						8- 9-50	8 a.m.	.....	2,600		Respirator at night.
							4 p.m.	.....	1,900		
						8-12-50	.....	.....	1,800	3	Chest pain.
						8-13-50	8 a.m.	.....	2,175		
						8-14-50	8 a.m.	.....	1,950		Fever, increased pulse and respiration rate. Returned to respirator.
42	M	17	4,500	2 hr. thrice daily	10	10- 7-49	8 a.m.	.....	1,100		Drop in vital capacity. Returned to respirator.

TABLE 4.—*Development of Complications in Well Stabilized Patients Placed on Rocking Bed*

Case	Sex	Age	Normal Vital Capacity (Calculated) (cc.)	Time Out of Respirator Before Put on Rocking Bed	Days Since Respirator Care Begun	Date	Time	Tidal Air (Bed at Rest) (cc.)	Vital Capacity (Bed at Rest) (cc.)	Days on Bed	Reason for Removal
31	F	21	3,100	45 min. thrice daily	18	10- 5-49	.....	275	650		Fatigue.
						10- 6-49	8:00 a.m.	.....	500	1	
						10- 6-49	3:00 p.m.	150	450		
32	F	29	3,000	30 min. thrice daily	21	10- 6-49	.....	400	950	3½ hr.	Increased mucus.
				45 min. thrice daily	26	10-11-49	8:30 a.m.	350			
							3:30 p.m.	275	925	6 hr.	Increased mucus.
33	F	12	.....	15 min. thrice daily	17	.....	.....	No record		9 hr.	Increased pulse.
34	M	7	.....	15 min. 4 times daily	21	.....	.....	No record		14 hr.	Nausea, dizziness, fatigue.
35	M	26	4,900	90 min. thrice daily	14	10-31-49	6:00 p.m.	.....	1,000	3¾ hr.	Increased mucus; tracheotomy.
36	M	27	4,800	.....	33	9- 6-50	.....	.....	350	1 hr.	Breathing 2 to 3 times rocking bed rate.
				30 min. thrice daily	54	9-27-49	9:00 a.m.	200	350	30 hr.	
							9:00 p.m.	75	150		Could not coordinate with rocking bed.
						9-28-49	9:00 a.m.	200	350		
							4:00 p.m.	75	200		

The patient was apprehensive and had pronounced nuchal rigidity. There was moderate spasm and weakness of both upper extremities. The intercostal muscles and diaphragm were weak. The spinal fluid contained 338 cells per cu. mm., all lymphocytes, and the reaction to a Pandy test was 2 plus. At the time of admission the patient could swallow water but shortly thereafter began to have difficulty in doing so. She was placed on the rocking bed at a rate of 18 to 20 per minute about 2 p.m., August 5. At that time the pulse rate was 130, respirations were 39 per minute, and oxygen was being given by nasal catheter. At 8 p.m. the pulse rate was 120 and respirations were 36 per minute. Two hours later the pulse rate was 112 and respirations 28 per minute. It was noted also that the patient slept for very short intervals during the night and in the morning she stated that she was very tired. The following evening the patient began to vomit, the pulse became rapid and faint and the blood pressure could not be measured. At 11 p.m. she was placed in a respirator where she remained overnight. The patient had some difficulty in coordinating with the respirator and the following morning, August 7 at 10:30, she was transferred back on the rocking bed. At this time the pulse rate was 80 and respirations 26 per minute. The rocking bed was running at 18 per minute and the patient finally coordinated with it after an hour or so. On August 9, the rocking bed was stopped for 30 minutes for meals and nursing care, and by August 12 the patient was rocking only from 8 p.m. to 6 a.m. On August 14 the bed was stopped entirely and on August 16 the patient was transferred to a regular bed. A two-and-one-half-month fetus was aborted on the same day. The patient was discharged on August 22, 1949, but with provision made for a standby respirator. At that time the intercostal muscles were weak, the diaphragm fair. There was rather pronounced weakness of both upper extremities and slight weakness of both lower extremities.

* * *

A 31-year-old man (Case 30) was put on the rocking bed on August 2, 1949, after he had been in the respirator four days. He became tired, apprehensive and cyanotic in 45 minutes on the rocking bed and was put back in the respirator. On August 16 he was placed on the rocking bed again, and six days later on a flat bed. (The patient actually falls into both of the previously defined groups, the "early" and the "late.")

* * *

A 21-year-old female (Case 31) was admitted and placed on the rocking bed on September 17, 1949 at 10:30 p.m. Vital capacity at the time was 800 cc. and tidal air 125 cc. The following day the vital capacity was 475 cc. but the patient remained on the rocking bed until September 21, 1949. At that time she was placed in the respirator at negative 18 pressure and ventilated at 450 cc. tidal air. On October 5, after two weeks in the respirator, the patient was again placed on the rocking bed. Tidal air volume at that time was 275 cc. and vital capacity was 650 cc. The following morning the vital capacity was 500 cc. and by 3 p.m. the tidal air had dropped to 150 cc. and the vital capacity to 400 cc. The patient was then put back into the respirator. The rocking bed treatment of this patient in both the early and late phases of the disease was therefore unsatisfactory.

* * *

A 29-year-old female (Case 32) had onset of symptoms on August 30, 1949, with gradually increasing paralysis. On September 14, 1949, partial facial paralysis and difficulty in swallowing were noted. The patient was placed on the rocking bed on September 14 at 1 p.m. and the vital capacity and tidal air volume were improving with the bed in motion. However, it was noted that by 5:30 p.m. there had been considerable deterioration and at noon the next day the vital capacity was 450 cc. The patient was placed in the respirator and tracheotomy was carried out. The patient remained in critical condition, with fainting spells and episodes of bradycardia, but by October 6 her condition was improved and the vital capacity was 950 cc. and the tidal air volume 400 cc. She was placed on the rocking bed for 3½ hours but was removed because of increased mucus. On October 10, the patient was again placed on the rocking bed, but six hours later was returned to the respirator.

* * *

In Case 33 the patient was placed on the rocking bed 17 days after she was placed in the respirator. She remained on the rocking bed for nine hours. Nausea occurred and Dramamine® was given, but the patient was returned to the respirator because of increase in pulse rate.

Twenty-one days after he had been put in the respirator the patient in Case 34 was placed on the rocking bed for 14 hours. He was removed from the bed because of nausea, dizziness and fatigue.

* * *

A 26-year-old male (Case 35) was admitted October 16, 1949, after five days of illness, with backache and headache and progressive weakness in the legs for two days, together with inability to cough. The spinal fluid cell count was 94 per cu. mm. and there was positive reaction to a Pandy test. As the condition of the patient deteriorated, he was placed in the respirator on October 17, 1949. The vital capacity at that time was 1,200 cc. By October 31, the patient was out of the respirator one and one-half hours three times daily and was considered a good candidate for the rocking bed. He was placed on the rocking bed at 6 p.m., and at 9:45 p.m. it was noted that there was considerable accumulation of mucus in the trachea. The patient became tired in unsuccessful attempts to cough it up. He was immediately placed back in the respirator. On the following morning it was noted that vital capacity had dropped to 750 cc. and that the breath sounds were absent over the entire left lung. The patient complained of pain in the left side of the chest. In x-ray studies atelectasis of the entire left lung was noted. The same morning laryngoscopy and bronchoscopy were carried out and a large amount of mucus was removed. Two days later, on November 3, the patient became cyanotic with a pulse rate of 140 and with gasping respiration. Bronchoscopy and tracheotomy were carried out and a good deal of mucus was brought up. With positive pressure and aerosol treatment the patient began to improve. He was permitted out of the respirator 15 minutes four times daily for nursing care only. The patient was discharged in the respirator December 2, 1949, to Rancho Los Amigos. At the time of discharge the vital capacity had returned to 1,070 cc. and the patient was permitted out of the respirator 30 minutes four times daily.

* * *

Case 36. The patient was placed in the respirator on August 4, 1949. On September 6, 1949, he was placed on the rocking bed. After one hour he was put back in the respirator as he consistently breathed two to three times the rate of the bed. However, it is interesting to note that at the time the vital capacity was approximately 350 cc. Another attempt was made to put this patient on the rocking bed September 27 (see Table 4). Thirty hours later the vital capacity was 200 cc. and the tidal air volume was 75 cc. and the patient was returned to the respirator.

* * *

Case 37. A 29-year-old female was admitted September 27. Tracheotomy was carried out and she was placed in a respirator. At that time the vital capacity was 400 cc. and the following day it was 200 cc. The patient began to improve and by November 11, when the vital capacity was 1,150 cc. she was out on a bed four hours twice daily.

The patient was put on the rocking bed to rock alternate hours until 8:00 p.m. and then rock all night. Dramamine® was prescribed. The second day she rocked at night but not during the day, a routine which was continued until November 15. It was then decided at a staff conference that since the vital capacity had not increased materially, the patient would be returned to the respirator for three nights and be permitted to be on a flat bed during the day. This was done and at the end of three days the vital capacity was 1,520 cc. The patient was then left in the respirator for another four nights and the improvement was maintained. She was then placed back on the rocking bed at night until December 5. At that time the vital capacity was 1,600 cc. or approximately 50 per cent of normal and the patient was permitted to sleep on a flat bed with no return to the respirator.

* * *

Case 38. The patient was placed on the rocking bed one month after she had been put in a respirator. At this time the vital capacity was 1,950 cc. However, with the patient on the rocking bed the vital capacity dropped and it was necessary to put her back in the respirator at night. Two days later, on December 20, she was returned to the respirator during the day also because it was felt that improvement had not continued. At the time of discharge the patient was spending five hours a day on a poliomyelitis bed and the rest of the time in the respirator. The vital capacity was 1,700 cc.

* * *

Case 39. The patient, a 22-year-old male, was first placed in the respirator on September 11, 1949. On September 22, he was placed on the rocking bed. Vital capacity at that time was 500 cc. By September 27 at 8:00 a.m. the patient had become irrational and confused and he was returned to the respirator at 4:00 p.m. Vital capacity then was 300 cc. On November 16, the patient was again placed on the rocking bed. At this time vital capacity was 1,025 cc. and tidal air volume 400 cc. After two days he was put in the respirator at night and on the rocking bed during the day, a routine which was followed until the patient was transferred to a naval hospital, Dec. 6, 1949. Vital capacity at the time of discharge was 1,000 cc.

* * *

In Case 46 the rocking bed was used to aid in chest drainage. A 16-year-old boy was placed in the respirator Nov. 16, 1949. There was pronounced involvement of the third, fourth, sixth, seventh, ninth, tenth and eleventh cranial nerves. Suppurative pulmonary disease and right lower lobe atelectasis and pneumonia developed, and the rocking bed was used to agitate the secretions and to place the patient in Trendelenburg position for a short period several times daily so that satisfactory drainage could be obtained. Eventually the rocking bed was substituted at night for the respirator, but at the time it was first used the patient had a vital capacity of 2,200 cc. and was out on a flat bed for 12 hours daily.

* * *

Case 41. A 33-year-old male was placed in a respirator July 1, 1950. On August 8 he was out of the respirator one and one-half hours three times daily and doing well. He was placed on the rocking bed at 8:00 a.m. on August 8. Vital capacity then was 2,150 cc. When the patient was returned to the respirator at 4:30 p.m., vital capacity was 1,500 cc. After a night in the respirator vital capacity rose to the previous level and during the following day on the rocking bed it decreased only 200 cc. On Aug. 12 the patient complained of pain in the chest. The vital capacity was 1,800 cc. After 24 hours in the respirator, vital capacity was 2,175 cc. and the chest pain was gone. The patient then was put back on the rocking bed and permitted to rock for 24 hours. At 8 a.m. the temperature was 102.6°F., the pulse rate 134 and respirations 24 per minute, and vital capacity was 1,950 cc. The patient was nauseated. At noon he was put back in the respirator. The fever continued.

The rocking bed was employed as a treatment procedure for 23 patients with chronic poliomyelitis at Rancho Los Amigos. Five of the 23 could not remain as much as 10 minutes out of the respirator. Sixteen patients were able to remain out of the respirator at least several hours but had to be returned

for the night. The remaining two returned to the respirator for occasional rest.

The 23 patients will be considered in three groups. The first consisted of five patients who had a short tolerance time out of the respirator and were put on the bed for periods of up to four hours. In the second group were nine patients who were able to breathe without assistance for at least several hours but still had to sleep in the respirator. In these cases the question was not whether there was adequate ventilation while rocking, but whether there were any possible undesirable side effects. In the third group there were nine patients who tried to sleep on the rocking bed after they had tried the bed during the daytime. They would otherwise have had to sleep in a respirator.

Table 5 gives data on the five patients in the first group. In all of these cases the patient was put on the rocking bed for short periods once daily and the time was gradually increased to the maximum period indicated. The inclination of rocking was 18 or 22 degrees depending on the bed used, although with the first patients the angle may have been somewhat less. The head section of the Gatch frame was raised about 8 inches and the knee section broken about 4 inches. The rate of oscillation varied from 16 to 20 per minute depending on the natural respiration rate of the patient and on the subjective response.

In Cases 2, 5 and 10 the patients tolerated the bed from one to four hours daily but then had to be returned to the respirator because they usually complained of fatigue, although naturally the exact time varied with the general vitality of the patient. These patients had no diaphragm or intercostal strength and it was noted that they assisted the rocking bed action with the use of the accessory muscles in the neck. Hardly ever did these patients nap on the rocking bed. In Case 9 the length of time the patient spent on the rocking bed was gradually increased to about one hour. It was necessary to give her supplementary oxygen. After two or three weeks it was noted that there was a gradual decline in general strength, that the patient was not able to tolerate physical therapy as well as previously and that it became necessary to increase the amount of oxygen. In Case 11 the course was similar. Accumulation of mucus increased and a respiratory infection developed. It was felt that the rocking bed was contraindicated in these cases, although shorter periods might have been tolerated. While out of the respirator and on the bed, these patients received more physical therapy than they had been accustomed to, and this may have contributed to the intolerance. The use of the bed was stopped in the other cases because of reasons other than undesirable effects. In Case 10 the patient was sent home, there to remain in a respirator full-time.

Nine of the patients who were given rocking bed treatment had considerable independence of breathing; all of them could be out of the respirator for several hours (Table 6). With them, it was not at all a question of adequacy of ventilation when on the rocking bed. It should be noted that in one case in this group increased mucus in the trachea was a complication. Treatment periods were one hour once daily.

If the rocking bed could be substituted in cases in which the respirator is required only for sleep, a possible saving in patient care, a more natural situation for sleep, improved morale, and other possible benefits might be expected. With this in mind, nine patients who already had shown good tolerance to rocking during waking hours were considered good candidates for sleeping on the rocking bed. All of the nine patients except one (Case 20) had been using the rocking bed, while awake, for weeks. In most cases the period of rocking was increased to five or six hours into the sleeping hours before the patient was permitted to sleep on the bed through the night. The patients were observed closely for any signs of loss of sleep, progressive fatigue and drop in vital capacity.

Table 7 summarizes the observations in these cases. It should be noted that the vital capacity of these patients was 300 cc. or more at the beginning of this study. The patients could usually sleep well even though most breathing was largely by neck accessory muscles. With a small amount of diaphragm action, other conditions being equal, it would be expected that sleeping on the rocking bed would be much easier. This is in accord with repeated clinical observations on patients who try to sleep without the aid of artificial respiration. All of the patients except one (Case 20) would have needed the respirator for sleep if it had not been for the aid produced by the rocking bed.

One patient (Case 7) required the use of the res-

TABLE 5.—*Rocking Bed Tolerance with Short Tolerance Out of Respirator*

Case	Sex	Age	Onset	Date Rocking Bed Started	Date Rocking Bed Stopped	Tolerance Out of Respirator	Maximum Tolerance on Rocking Bed	Stabilized Vital Capacity (cc.)	Remarks
2	F	23	8-10-48	8-22-49	5-50	5 min.	4 hr.	100	Patient transferred
5	F	35	6-25-48	11- 2-49	5-50	5 min.	1 hr.	100	Patient transferred
9	F	35	11-15-48	11- 2-49	12-19-49	3 min.	1 hr.	0	Did not tolerate
10	M	25	11-15-48	11- 2-49	1- 5-50	2 min.	1 hr.	100	Discharged home
11	F	27	11-15-48	11- 2-49	12-16-49	10 min.	1 hr.	250	Did not tolerate

TABLE 6.—*Rocking Bed Tolerance with Long Tolerance Out of Respirator*

Case	Sex	Age	Onset	Date Rocking Bed Started	Vital Capacity (cc.)	Remarks
1	F	37	8- 2-48	8-22-49	300	No undesirable effects—still uses bed.
3	F	33	10- 9-48	11- 9-49	300	No undesirable effects—still uses bed.
4	F	28	9- 4-48	11- 9-49	750	No undesirable effects—discharged February 1950.
8	F	38	9-15-48	11- 9-49	900	No undesirable effects—now once weekly.
13	M	5	10-14-48	8-49	400	No undesirable effects—stopped December 1949.
14	F	27	7-14-48	8-49	1,000	No undesirable effects—stopped December 1949.
15	M	42	11-13-48	8-49	700	Tried only few times—patient did not like it.
19	F	21	9-28-48	4- 7-50	350	Tolerated—but increased mucus.
23	M	16	7-31-48	11- 2-49	600	No undesirable effects.

TABLE 7.—*Substitution of Rocking Bed for Respirator When Respirator Used Only at Night*

Case No.	Sex	Age	Onset	Date Rocking Bed Started	Vital Capacity (cc.)	Date Rocking Bed Stopped	Vital Capacity (cc.)	Breathing Pattern	Remarks
6	M	17	8-28-48	3-20-50	470	Continued	600	Neck chiefly, some chest, no diaphragm	Sleeps well on rocking bed
7	F	31	7-11-48	1-12-50	300	1-26-50	400	Neck accessories only	Slept poorly, very tired
12	F	34	11-11-48	12- 2-49	400	12-23-49	1,400	Weak chest and diaphragm; some neck accessory action	Slept well but tracheal bleeding
20	M	18	3-20-50	5-31-50	2,000	6- 6-50	2,300	Good pattern, slight weakness	Transition from respirator to bed
21	M	22	11-18-49	7-10-50	1,350	10-20-50	1,350	Weak diaphragm and chest, uses neck	Transition from respirator to bed
22	M	19	7-22-48	11- 7-49	400	1-13-50	400	Uses neck only	Slept well; discharged with respirator
24	F	33	11- 4-48	2-28-50	700	5- 9-50	700	Weak diaphragm and chest, uses neck	Slept well; transition from respirator to bed
25	M	7	11- 8-48	5- 2-50	480	5- 8-50	480	Nearly all neck accessory action	Slept well but temporary complications
26	M	14	10-10-48	1-16-50	400	Continued	600	Nearly all neck accessory action	Sleeps well

pirator with a very high negative pressure (35 cm. of water). This was sufficient to produce over one liter of ventilation. It is plain that if the patient were to breathe this amount of air continuously at each breath, alkalosis and tetany would soon develop. This was prevented by the patient by throttling all but every third or fourth breath so that on the average she would breathe the proper amount. The respirator pressure used in this case is difficult to maintain and with it there is a possibility of damage to the cardiorespiratory system. For this reason attempt was made to break this peculiar breathing mechanism by having the patient sleep on the rocking bed. The patient was able to get some sleep, but she became progressively insomnic and signs of exhaustion appeared. In spite of the poor clinical effect, the vital capacity increased. However, the rocking bed for sleeping was discontinued.

Although in Case 12 the patient slept well, tracheal bleeding of unknown origin developed while the rocking bed program was being followed, so it was decided to discontinue the procedure.

In Cases 6, 20, 21, 22, 24, 25 and 26 the patients appeared to tolerate the rocking bed well for sleeping at night; and two of these patients (Cases 6 and 26) are still using it. In Cases 20, 21 and 24 the bed was used to advantage in weaning from the respirator. In Case 22 the rocking bed had to be discontinued when the patient was discharged home where he uses a tank respirator. In Cases 25 and 26 the patients had to return to use of the respirator temporarily because of complications apparently not related to the rocking bed. In Case 25 use of the rocking bed was discontinued because it had to be removed from the ward.

About half of these nine well stabilized patients with chronic poliomyelitis had an upward trend in vital capacity while on the rocking bed.

DISCUSSION

These clinical observations on patients with weakness of respiratory muscles, as well as accepted physiological principles point to the concepts which should be considered in the use of the rocking bed when there is appreciable weakness of the muscles of respiration.

Ordinary breathing consists of the tidal ventilation of air in and out of the lungs. The ventilation per minute is determined by the rate and depth of breathing. This volume is precisely controlled by the respiratory center which in turn may be influenced directly or reflexly by various factors such as oxygen and carbon dioxide tensions of the blood plasma, blood bicarbonates and pH, certain hormone-like substances, the Hering-Breuer reflexes and a number of drugs. Pulmonary ventilation has two important functions: One is to maintain the proper oxygen tension of the blood; the other is to aid in maintaining the proper blood pH. Hyperventilation produces blood alkalosis (respiratory alkalosis) because the carbon dioxide is worked out of the lungs but no appreciable increase in blood oxygen tension or increase in oxyhemoglobin saturation occurs. Inadequate ventilation produces relative acidosis (respiratory acidosis) resulting from an accumulation of carbon dioxide and a decrease in blood oxygen tension associated with a decrease in the oxyhemoglobin saturation. Deficiency of ventilation does not decrease the oxygen requirements of the tissues except in the terminal stage of asphyxiation (anoxia) and possibly in chronic anoxia which is sufficiently prolonged and intense to produce tissue deterioration.[5] In the presence of a normal cardiorespiratory system, adequate strength of the respiratory muscles, a normal regulatory system and adequate oxygen, the oxygen supply to the tissues is ample over a wide range of conditions and the blood pH is maintained within narrow limits (pH 7.35 to pH 7.45). In the presence of weakness of the respiratory muscles this system may break down, although a certain amount of compensation—increase in pulse rate and in the bicarbonate content of the blood—takes place. In the presence of good nutrition there may be an increase of hemoglobin, but the tendency is toward anemia.

There is considerable clinical evidence that prolonged mild anoxia and exhaustion associated with pronounced weakness of the respiratory muscles in poliomyelitis will lead to general tissue deterioration especially of the brain and the gastrointestinal tract. This seems to result especially from inadequate exchange of oxygen and carbon dioxide during the sleeping hours. Some of these observations have been emphasized in a previous publication.[2]

The most important muscle of respiration is the diaphragm. Sudden bilateral phrenic nerve paralysis is very serious unless the patient is given adequate artificial respiration. The muscles that produce expansion of the lower chest function chiefly in preventing chest collapse when the diaphragm acts. The most automatic pattern of breathing is that carried out by the action of the diaphragm together with expansion of the lower chest. This is normally the chief component of what may be termed "unconscious breathing." The muscles that expand and raise the upper chest also take part in quiet breathing but to a lesser degree. If there is sufficient weakness of the diaphragm so that it cannot easily maintain the required ventilation, the muscles that expand and raise the chest increase in their action. If this action is inadequate, the accessory muscles in the neck in turn come into action and the muscles producing chest and abdominal compression may eventually assist breathing. Just which muscles are used depends on the required tidal air, on general and individual muscle strength, on the wakefulness of the individual and on habit patterns that have been developed.

If the patient has to depend to an appreciable degree on accessory muscles for quiet breathing, it is usually difficult for him to sleep, since "unconscious breathing" usually requires the use of the diaphragm and lower chest muscles. Such a patient may "subconsciously" use various accessory muscles during the waking hours and have sufficient ventilation. In a certain number of cases accessory patterns of breathing seem to become well linked to the respiratory center and become automatic "unconscious breathing," so that breathing with accessory muscles while asleep may be adequate. In such circumstances, however, great care should be taken lest the chronic effects of partial asphyxia develop because of inadequate muscle strength or insufficient automaticity. If accessory action is not well established for sleep, the cerebral and somatic functions may so deteriorate that the patient may even die unless he is given adequate artificial respiration, especially while sleeping.

Tests by the authors as well as those of Macintosh and Mushin indicate that the rocking beds that were used did not produce the tidal air required for quiet breathing in cases of complete paralysis. In contrast, the tank respirator is capable of producing about two times the basal tidal air required in most cases. Therefore, it appears that the rocking beds tested can be safely used during sleep only in those cases in which there is at least an appreciable amount of "unconscious" or automatic breathing, and during the waking hours only if the patient is able to sufficiently supplement the effect of the bed by subconscious effort without signs of fatigue or impairment.

CRITERIA FOR USE OF THE ROCKING BED

On the basis of the physiological concepts and clinical observation described in this report, the rocking bed can be used for the purpose of assisting respiration in cases in which there is weakness of the respiratory muscles. It should not be used during the febrile period of poliomyelitis, nor in the presence of secondary complications such as atelectasis, pneumonia, upper respiratory tract infection and urinary infection.

The rocking motion may cause motion sickness, as manifested by nausea and dizziness, especially if the bed is used soon after the occurrence of paralysis. Dramamine® is of value in the prevention of this complication.

It has been observed that the rocking motion tends to increase the amount of mucus in the respiratory tree, particularly during the first few hours, but the explanation is not clear. If the patient tends to have an increase in mucus as in respiratory infection and moderate bulbar involvement, the rocking bed may be contraindicated, especially in the absence of tracheotomy. Any patient when first placed on the rocking bed should be given individual nursing care and should be closely observed for increased mucus and possible occlusion of the bronchi.

The programs followed by the authors for placing patients on the rocking bed varied to accord with the facilities for special nursing care and in consideration of whether the patient was in an early stage of the disease or had had it for a number of months. Observations indicated that the following considerations and methods make for the best rocking-bed program for patients during the first few weeks after the febrile period:

1. The patient should be able to be out of the respirator at least one hour three times daily without the use of the accessory muscles and with no increase in pulse rate or other untoward reaction.

2. The vital capacity should be at least one-third of the normal standard, and there should be record of a consistent increase with at least one-half of the vital capacity due to diaphragmatic action, before a patient is considered for rocking-bed treatment.

3. When the patient is on the rocking-bed program, the vital capacity should be tested twice daily for several days, and daily thereafter. If it decreases, return to the respirator is indicated.

4. The daily schedule should begin with six to eight hour periods on the rocking bed, with the patient returned to the respirator at night. If there are no ill effects and the vital capacity does not decrease, the patient then may be permitted to sleep on the rocking bed.

Patients who in the early stages of the disease do not meet the criteria for being put on the rocking bed, may later do well with this treatment even though they then may have much lower vital capacity.

Between the eighth week and the eighth month, when muscle function is still returning, the patient ordinarily should not be permitted to use the accessory muscles of breathing. If during that period he is able to be out of the respirator for as much as 15 minutes at a time without using accessory respiratory muscles, the rocking bed can usually be well tolerated during the daytime, provided the time he spends on the bed is not too rapidly increased.

Some patients who need to use the accessory respiratory muscles because of moderate weakness of the diaphragm and intercostal muscles may do well on the rocking bed for short periods, but they should be closely watched.

If, after six to eight months, there appears to be no appreciable return of diaphragmatic strength, it is usually advisable to permit the patient to use the neck or other accessory muscles when he is out of the respirator. If it appears early that there is little likelihood that diaphragm function will improve, the period of trial may be shortened somewhat. A patient who has no return of chest and diaphragm muscles should develop the strength of the accessories. Usually if there is no weakness of the accessory muscles the patient is able to remain out of the respirator all day. The vital capacity in such a case should be at least one-tenth normal. Usually, however, a patient who depends upon the action of accessory muscles cannot breathe while asleep unless assisted by a respirator or rocking bed. It appears clinically in such cases that the respiratory center takes over during sleep with difficulty. Great care should be taken before such a patient is permitted to sleep on the rocking bed, since the bed only assists in the volume of breathing. It is important to follow the progress of the patient carefully with regard to general vitality, appetite, nutrition, mental alertness, vital capacity, and development of disturbing symptoms such as headache.

The following guides would seem to be applicable for use of the rocking bed for patients six months or more after onset of the disease — always with recognition, however, that they must be modified in event of development of certain side reactions such as nausea, vertigo, accumulation of mucus, and signs of fatigue, exhaustion and anoxia including changes in pulse rate, lassitude, loss of appetite and decrease in vital capacity:

1. If the patient has no vital capacity and cannot be out of the respirator more than three minutes, use of the rocking bed is not feasible.

2. If the patient is able to be out for more than three to five minutes, especially if there is fair function of the diaphragm, he can usually be put on the rocking bed for increasing times, up to several hours.

3. If the patient is able to be out several hours on his own strength, there should be no difficulty whatsoever in placing him on the rocking bed, for any desired time, during the waking hours.

4. If the patient is able to be out of the respirator all day without any difficulty, especially if vital capacity is over 10 per cent of normal and at least half of this is due to diaphragm action, then he should be able to sleep on the rocking bed. In some cases even patients who depend entirely on accessory muscles for breathing do well sleeping on the rocking bed. It is important that conversion to sleeping on the rocking bed be done gradually and that vital capacity be checked daily for the first two or three days. All patients, and especially those who depend on accessory muscle action, should be watched very carefully for signs of intolerance.

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Trisethylene-Imino-s-Triazine (Triethylene Melamine or TEM) in the Treatment of Neoplastic Diseases

Michael B. Shimkin, M.D., Howard R. Bierman, M.D., Keith H. Kelly, M.D., Elizabeth Lowenhaupt, M.D., Arthur Furst, Ph.D., *San Francisco*

SUMMARY

Trisethylene-imino-s-triazine (triethylene melamine or TEM) produced minimal effects in inhibiting transplantable lymphoma and mammary adenocarcinoma in mice. In strain A mice, injection of the compound induced pulmonary tumors.

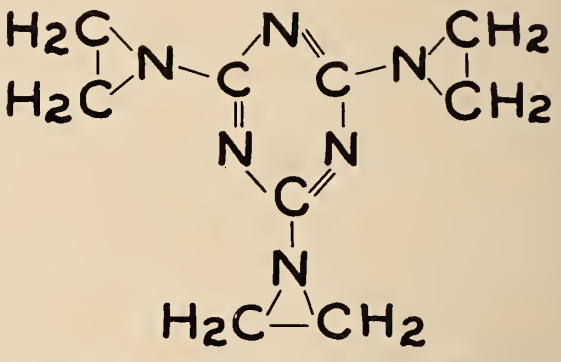
TEM was tried on 32 patients with neoplastic disease, including nine patients with Hodgkin's disease and five with lymphosarcoma and lymphatic leukemia. The therapeutic and toxic effects were similar to those observed with nitrogen mustard (HN2). Satisfactory remissions of up to three months were observed in Hodgkin's disease and lymphosarcoma following parenteral administration of TEM. It is the authors' impression that the remissions obtained with TEM were not as complete and did not last as long as those obtained with HN2.

TEM is effective by the oral route as well as parenterally, and produces much less emetic reaction than HN2. On the other hand, the chemotherapeutic range is narrower than that of HN2. Patients who do not respond to HN2 show no response to TEM.

TEM is a drug of some clinical usefulness in the same conditions and with the same general limitations and toxic effects as HN2. The ease of administration of TEM increases its hazards, and close clinical and hematologic observations are essential on patients receiving the agent.

THE discovery that certain nitrogen mustard compounds have ameliorative effects in Hodgkin's disease and related lymphomas[4] has led to the synthesis and biologic testing of a wide spectrum of related chemicals for their tumor-inhibiting properties. The investigations thus far have not uncovered agents which by clinical standards are clearly superior to methyl-*bis* (B-chloroethyl) amine (HN2) or methyl-*tris* (B-chloroethyl) amine (HN3). These powerful vesicants must be given directly into the blood stream, and they produce severe nausea and vomiting as well as occasional phlebothrombosis.

Chart 1.—Chemical structures of TEM.



A number of compounds related to the nitrogen mustards have been devised recently in England[7, 9] and the United States[3, 6] which appear to have effects similar to the nitrogen mustards but which have less emetic reaction and are effective when administered by the oral route. Among these compounds (Chart 1) is trisethylene-imino-*s*-triazine.

The present report deals with the laboratory and clinical investigations of trisethylene-imino-*s*-triazine.* This compound is more familiarly known as triethylene melamine or TEM, as it will be referred to hereinafter.

ANIMAL STUDIES

Toxic effects. Mice of strains A and C3H, three months old and weighing approximately 25 gm., tolerated doses of 0.04 mg. of TEM dissolved in water or saline solution and injected intraperitoneally or intravenously. Approximately half of the group of animals died within five days following doses of 0.1 mg. There was a precipitous drop in the number of circulating leukocytes, and a moderate drop in the number of platelets within four days following

From the Laboratory of Experimental Oncology, National Cancer Institute, National Institutes of Health, Public Health Service, Federal Security Administration and the Division of Medicine, University of California School of Medicine, San Francisco (Shimkin, Bierman, Kelly); the Division of Pathology, University of California School of Medicine, San Francisco (Lowenhaupt); and the Division of Chemistry, University of San Francisco, San Francisco (Furst).

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*The compound was made available for this study in November 1949 by Dr. Frank L. Rose of the Imperial Chemical Industries, Manchester, England. Dr. M. L. Crossley of the American Cyanamide Company supplied tablets of the material for oral use.

the administration of 0.1 mg. In histological examination of the tissues of the mice, the following phenomena were observed: Vascular engorgement of the viscera, disappearance of lymphocytes with atrophy of Malpighian corpuscles in the spleen, loss of cells from the follicles of lymph nodes, pronounced decrease in the cellular elements of both series in the bone marrow, and necrosis of the germinal epithelium of the testes.

Effect on tumors. The effects of TEM on tumor growth were investigated in strain A mice implanted with a transplantable lymphoma, and in strain C3H mice bearing a transplanted mammary adenocarcinoma. The animals were given 11 daily intraperitoneal injections of 0.0025 or 0.005 mg. of TEM dissolved in water, for a total dose of 0.0325 mg. Six mice were sacrificed at 12 days and the weights of the tumors and of the carcasses were compared with those of six untreated animals. The lymphomas in mice treated with TEM weighed an average of 1.45 gm. (0.9 gm. to 2.1 gm.), whereas the untreated tumors weighed 3.2 gm. (2.7 gm. to 4.6 gm.). The effect on mammary tumors was much less pronounced: the tumors of the treated animals weighed 2.5 gm. on the average, whereas the untreated tumors weighed 2.9 gm. The total body weight of the animals was not affected.

The experiment was repeated with ten mice in the treated and untreated groups of each strain. The strain A mice with the lymphoma treated with TEM lived for an average of 36 days (29 to 38) whereas the controls died at an average of 33 days (29 to 37): the tumor obviously grew rapidly after the conclusion of the treatment. The strain C3H mice with mammary tumors treated with TEM lived an average of 31 days (22 to 51) whereas the untreated controls survived for 23 days (12 to 35). In all animals there was progressive growth of the neoplasm even while under active treatment with TEM, and all the animals died of the neoplastic growth.

Reported effects on other transplantable lymphomas, sarcomas and carcinomas in the mouse[3, 6] and on the Walker rat carcinoma[9] indicate more pronounced inhibition of tumor growth than was elicited in the present investigation.

Carcinogenic effect. It has been pointed out[11] that many chemical agents which have inhibitory effects on tumor growth also have carcinogenic properties. The nitrogen mustards, for example, induce pulmonary tumors in mice.[5]

TEM was administered intravenously to 20 strain A mice two months of age. The initial dose of 0.05 mg. in 0.1 cc. of saline solution was followed by two doses of 0.025 mg. at monthly intervals, for a total dose of 0.1 mg. Six additional mice received single intraperitoneal injections of 0.05 mg. Fifteen mice were maintained as untreated controls. The mice were sacrificed 18 weeks following the initial injection, and the lungs were examined for the presence of pulmonary tumors.

Of the 15 untreated controls, two had solitary pulmonary tumors. This incidence coincides with the 10 to 15 per cent incidence of spontaneous pulmonary tumors in strain A mice six to seven months of age.[10]

The six mice that received 0.05 mg. of TEM intraperitoneally had 2, 3, 0, 2, 1, and 0 pulmonary tumors, respectively, or an average of 1.3 tumors per animal. The 20 mice injected with 0.1 mg. intravenously had an average of 2.1 pulmonary tumors per animal; four mice had no tumors, four had single tumors, eight had two to three tumors, and four had four to six nodules in the lungs.

Four C3H male mice injected subcutaneously or intraperitoneally with 0.05 mg. of TEM were killed one year later. No tumors at the site of injection were found, but two mice had one and two pulmonary tumors, respectively.

It is concluded that TEM is carcinogenic for the pulmonary tissue of mice, and that its carcinogenic potency is of the same order as found for HN2 by Heston.[5]

CLINICAL STUDIES

Since February 1950, 32 patients with advanced neoplastic disease have received 60 therapeutic courses of TEM. Of the patients, 30 were treated at the Laboratory and two at Letterman Army Hospital.* The diagnoses in all cases were based on microscopic examination of at least one relevant biopsy specimen.

TEM is a white powder that is immediately soluble in water or in saline solution. Occasional samples of TEM contain granules or flakes which do not dissolve, indicating that polymerization has occurred and that the material should not be used. The compound is relatively stable in solution, and can be used for at least 24 hours if maintained in the refrigerator. For intravenous or intramuscular injection TEM is dissolved in sterile physiological saline, in concentrations of 1 or 2 mg. per cc.

For oral use, tablets of 5 mg. in a bland binder were employed. These were given with water, usually a half-hour before the noon meal.

Information regarding the patients and the treatment with TEM is given in Tables 1 and 2. There was no difference in toxic or therapeutic effects when the agent was given intramuscularly or intravenously, nor when the total dose was given in a single injection or in daily injections for three to seven days. The therapeutic dose or single course of TEM, if given intravenously or intramuscularly, is approximately 0.15 mg. per kilogram of body weight and should not exceed 0.25 mg. per kilogram of body weight. The agent should not be readministered until the hematologic status of the patient has returned to normal, which usually occurs within four to five weeks.

One patient (Case 19) with disseminated epidermoid carcinoma, primary in the nasopharynx, was injected intravenously with 0.5 mg. per kilogram of body weight and died on the 14th day showing hemorrhagic diathesis associated with pancytopenia.

*The staff of Letterman Army Hospital granted permission to use records on these two patients.

With oral medication, daily doses of 5 to 10 mg. for a total of 0.4 mg. per kilogram of body weight appear to be the safe upper limit for a single course of treatment. One patient (Case 4) with Hodgkin's disease received 0.9 mg. per kilogram of body weight during a course of two weeks, and hemorrhagic diathesis with petechiae, thrombopenia, severe leukopenia, and anemia developed. Repeated transfusions of whole blood, antibiotics, and other supportive measures were required.

Patients with lymphocytic leukemia appear to be extremely sensitive to TEM, and an initial parenteral dose of 0.05 mg. per kilogram of body weight, or 5 mg. orally, should not be exceeded until the effects of these lower doses are well established on the individual patient.

PHARMACOLOGIC EFFECTS

Immediate effects. In three cases study was made of electrocardiographic tracings, blood pressure, pulse and respirations during and for several hours following the intravenous administration of 0.1 mg. per kilogram of body weight. There were no significant changes. There were no general or local reactions to the agent within the first hour with any of the three routes of administration employed.

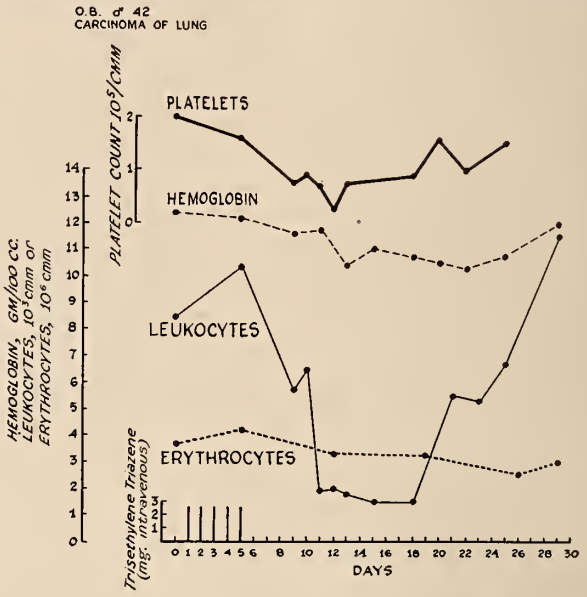
Local effects. In all but one patient, no serious local reactions occurred at the site of intravenous or intramuscular injection. Approximately one-third of the patients complained of some soreness at the site of intramuscular injection. In one patient (Case 15) with myelocytic leukemia, pronounced induration and inflammation occurred in the sites of intramuscular injection, and intravenous injection produced tenderness and redness along the course of the vein.

Gastrointestinal effects. Patients receiving over 0.2 of TEM per kilogram of body weight by intramuscular or intravenous routes experienced nausea for two to four days after completion of the course. Approximately one-third of these patients had one to four episodes of vomiting. The reaction was much less pronounced than that with HN2, and was usually delayed for four to six hours, as compared with the reaction to HN2, which usually occurs within an hour. With parenteral doses of 0.05 mg. per kilogram of body weight, or by oral route of administration, only mild nausea was encountered, unless the agent in a concentrated solution was injected rapidly into the vein. Diarrhea following treatment with TEM was noted in two patients receiving large doses of the agent.

Severe frontal headache, observed occasionally following HN2, was not observed in the 32 patients of this series treated with TEM.

Hematologic effects. The chief toxic effect of TEM is on the hematopoietic system. This effect is in every way comparable to the effects observed with HN2. Chart 2 illustrates the characteristic alterations observed on the peripheral blood picture of a patient with a bronchogenic carcinoma who received a dose of 0.25 mg. per kilogram of body weight.

Chart 2.—Characteristic effect of TEM on the cell count in peripheral blood. The patient with bronchogenic carcinoma (Case 21) received an intravenous course of 0.25 mg. per kilogram of body weight.



Within ten days there was a rapid decrease in the leukocyte and the platelet count, and a slower decrease in the erythrocyte count and hemoglobin value. In bone marrow aspirations at this time pronounced diminution in hematopoiesis, both of the white and red cell elements, was noted. Recovery from this depression began approximately three weeks after the drug was given.

With oral administrations, the hematologic depression was somewhat slower, particularly if the drug was administered at intervals of two or three days. The nadir of the leukocyte depression was usually observed in approximately two weeks and the count returned to normal within six weeks.

Other effects. In study of clinical and laboratory determinations before treatment with TEM and for as long as three months following treatment, no other major toxic effects that could be attributed to TEM were noted. In repeated examinations of the urine no significant changes were observed. Liver function, as measured by blood bilirubin, thymol turbidity, bromsulfalein retention, and cholesterol fractions, was not definitely changed. In one patient with Hodgkin's disease with jaundice, icterus was reduced following TEM therapy. Serum non-protein nitrogen, serum proteins, sodium, potassium and chloride were determined before and after treatment. There was no change in these factors. The uric acid level of the blood may be elevated for approximately one week following large doses of TEM.

THERAPEUTIC EFFECTS

Hodgkin's disease. All nine patients with Hodgkin's disease who were given TEM experienced definite subjective improvement within a few days. This

subjective improvement was manifested by a feeling of well-being, greater optimism, and increased appetite as soon as the transient nausea and anorexia abated. The duration of the subjective improvement was from a few days to three months.

Three patients who had not been treated with x-ray or HN2 previously had almost complete regression of peripheral lymph node enlargement. It is the authors' impression that the regression was somewhat slower than that observed following HN2. The diminution in size became apparent at three to seven days after completion of the course of TEM. With oral administration of TEM, regression usually commenced within a week. Although the data are insufficient for definite conclusions, it is the authors' impression that the remissions obtained in Hodgkin's disease with TEM were not as complete and did not last as long as those observed following treatment with HN2 in single doses of 0.3 to 0.5 mg. per kilogram of body weight.[2]

Two patients had previously received x-ray therapy but no nitrogen mustard. In both, remissions of one month were obtained with TEM.

Four patients had previously received both x-ray and HN2. Of these, two patients (Cases 2 and 5) were still responding to HN2, and also responded to courses of TEM with satisfactory remissions of two and one months, respectively. The remaining three patients (Cases 5, 6 and 9) did not respond to HN2 therapy, and also had no objective improvement following TEM. It is concluded that little or no benefit is to be anticipated in Hodgkin's disease from the use of TEM if HN2 is ineffective. Probably the obverse is true also: One patient continued to have undulating fever despite repeated courses of TEM, and was given a course of HN2. No dif-

Chart 3.—Clinical and hematologic course of a patient with Hodgkin's disease (Case 1) receiving TEM and HN2. There was no effect upon the undulating fever, although the enlarged cervical lymph nodes were considerably reduced in size and there was subjective improvement.

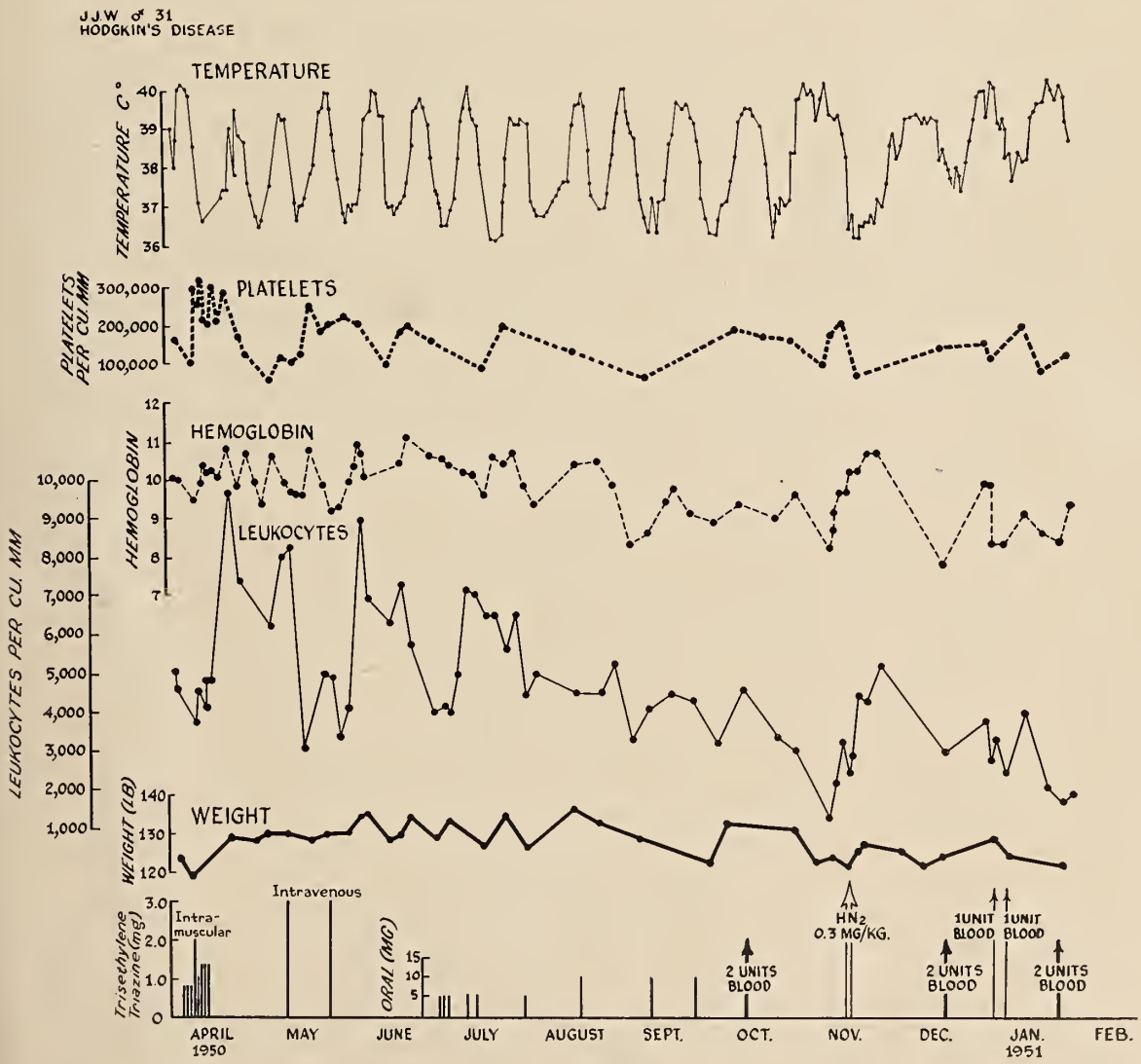


TABLE 1.—*TEM in the Treatment of Patients with Hodgkin's Disease and Other Lymphomas*

Case No.	Sex and Age	Duration of Disease (months)	Prior Therapy X-ray	Prior Therapy HN2	General Condition	TEM Therapy Route*	TEM Therapy Schedule† Admin./Days	TEM Therapy Total Dose (mg.)	TEM Therapy Dose (mg. per kg. of Body Weight)	Effect	Length of Remission (months)	Outcome Following Last TEM Therapy
					HODGKIN'S DISEASE							
1.	M 31	54	—	—	Fair	IM	7/7	8.5	0.15	Good	1	
		55			Fair	IV	2/14	6	0.10	Good	1	
		57			Fair	O	9/90	60	.....	Fair	2	Living—4 months
2.	M 23	60	+	+	Fair	IV	1/1	10	0.16	Good	2	
		62			Good	IV	1/1	10	0.16	Good	1	Living—3 months
3.	F 23	10	—	—	Good	O	2/2	20	0.4	Good	1	
		13			Good	O	4/4	20	0.4	Good	2	
		14			Good	O	4/4	20	0.4	Good	2	
		15			Good	O	2/8	10	0.2	Good	1	Living—2 months
4.	M 68	12	—	—	Good	IV	5/5	16.5	0.26	Good	3	
		15			Good	O	3/3	15	0.25	Good	1	
		16			Good	O	4/4	20	0.33	Good	1	
		17			Good	O	7/14	55	0.9	Toxic	..	Living—5 months
5.	M 33	36	+	+	Fair	IV	2/8	9	0.15	Fair	1	
		37			Fair	O	1/1	10	0.16	None	..	
		37.5			Poor	IV	1/1	10	0.16	Poor	..	Died—1 month
6.	F 29	17	+	+	Poor	IV	3/3	6	0.13	Fair	0.5	
		17.5			Poor	O	1/1	10	0.22	None	..	Died—1 month
7.	M 28	12	+	—	Fair	IV	3/3	7.5	0.15	Good	1.0	
		13			Fair	IV	3/3	7.5	0.15	Fair	0.5	Died—2 months
8.	M 26	4	—	—	Fair	IV	3/3	8.1	0.15	Good	0.5	Living—1 month
9.	F 27	24	+	+	Poor	IM	3/3	5.6	0.15	None	..	Died—1 month
					LYMPHOSARCOMA							
10.	M 39	5	—	—	Fair	IM	7/7	7.0	0.10	Good	2	
		5.5			Fair	IM	5/5	10.0	0.14	Good		
		7.5			Fair	O	2/2	10.0	0.14	Fair	0.5	Died—1 month
11.	M 32	25	+	+	Poor	IM	7/7	4.9	0.10	Fair	0.5	
		26			Poor	IM	4/4	6.4	0.12	Poor	..	Died—2 months
12.	M 55	6	—	—	Good	O	1/1	5	0.08	Good	1	
		8			Good	IV	2/3	2	0.03	Good	1	
		8.5			Good	O	1/1	5	0.08	Fair	0.5	
		9.5			Good	O	1/1	5	0.08	Fair	1	Living—1 month
					LYMPHOCYTIC LEUKEMIA							
13.	F 67	48	—	—	Good	IM	3/3	3.5	0.05	Good	3	
		55			Good	IM	2/3	1.5	0.02	Good	2	
		57			Good	O	1/1	5.0	0.07	Fair	1+	Living—1 month
14.	F 5	4	—	—	Fair	IM	1/1	0.5	0.03	Fair	1	
		5			Fair	O	1/1	2.0	0.13	Fair	0.5	
		6			Poor	O	1/1	2.0	0.15	Poor	..	Died—1 month
					MYELOCYTIC LEUKEMIA							
15.	M 38	18	—	—	Fair	IM	5/5	5.4	0.1	None	..	
		18			Fair	IV	2/2	2.8	0.05	None	..	Living—9 months
16.	F 63	140	+	—	Fair	O	2/4	10	0.13	None	..	
		142			Fair	O	5/30	30	0.4	None	..	Living—5 months
					MYCOSIS FUNGOIDES							
17.	M 58	170	+	+	Poor	IM	5/5	14.0	0.24	None	..	Died—1.5 months
18.	M 70	24	+	+	Fair	IM	7/7	6.8	0.10	None	..	
		26			Fair	IM	7/7	10.0	0.24	None	..	Died—10 months

* IM—Intramuscular; IV—Intravenous; O—Oral.

† The figures indicate the number of doses and the span of time over which they were given. Example: 7/7 means seven doses in seven days.

ference in effect in controlling the disease was noted (Chart 3).

Objective evidence of improvement following TEM therapy was judged by the effect upon lymph nodes, spleen, fever, and pruritus. Lymph node enlargement was reduced considerably in four patients, and moderately in two. It was not affected in two patients in whom previous HN2 therapy had also been ineffective, and one patient had no palpable lymph nodes. Splenomegaly was present in two patients. In one, the spleen was reduced in size, becoming no longer palpable. In the other patient, no longer responding to HN2, no effect was observed. Five of nine patients (Cases 1, 2, 3, 7 and 8) gained weight, up to 5 kg., during the month following TEM treatment. The one patient in good condition who did not gain weight (Case 4) received excessive doses which resulted in anorexia and pronounced bone marrow depression.

Three patients (Cases 1, 2 and 5) had fever as part of the course of the disease. TEM had no effect upon the febrile course in two patients, but did produce a remission of one month in the febrile course of one patient. Three patients had pruritus. In two, the pruritus was controlled, with complete relief for approximately two weeks. In one patient (Case 5), no longer responding favorably to either x-ray or HN2, the pruritus was not affected.

Lymphosarcoma and lymphocytic leukemia. Three patients with lymphosarcoma were treated with TEM. One patient (Case 11) in poor condition had slight reduction in the size of cervical, abdominal and thoracic masses, lasting for about two weeks, with subjective improvement and a weight gain of 2 kg. One patient (Case 10) with a rapidly progressing lymphoblastoma, had good remission for two months following two parenteral courses of TEM. The third course, given orally, produced much less effect. The third patient (Case 12) had lymphosarcoma involving the cervical, axillary and inguinal lymph nodes. In this case the bone marrow cell count was 90 per cent lymphocytes. One oral administration of 5 mg. of TEM produced pronounced regression in lymph node enlargement and a decrease in the number of lymphocytes in the bone marrow to 20 per cent. Satisfactory improvement was achieved with a second intravenous course.

The hematologic course of one patient (Case 13) with chronic lymphocytic leukemia is recorded in Chart 4. There was a decrease in the number of leukocytes in the peripheral blood within a few days of therapy, followed by a slower reduction in cervical and axillary lymph node enlargement. The remission lasted for three months, and was again achieved by two subsequent courses of TEM.

Another patient (Case 14) had primitive cell leukemia, either lymphoblastic or monoblastic in type, with large submaxillary lymph nodes. Prompt decrease of the leukocyte count with disappearance of the immature cells occurred after one intramuscular administration of 0.5 mg. of TEM. The lymph nodes regressed to approximately two-thirds the original size during the next two weeks.

Other lymphomas. Two patients with myelocytic leukemia (Cases 15 and 16) were treated with TEM. No effects were observed on peripheral blood counts, on bone marrow, or on splenomegaly. There was no subjective improvement.

Two patients with generalized, advanced mycosis fungoides (Cases 17 and 18), who were no longer responding to the intravenous administration of HN2, were treated with TEM. Depression of the leukocyte and platelet counts, and temporary hypoplasia of the bone marrow were observed, without clinical improvement.

Other neoplastic diseases. As indicated in Table 2,

Chart 4.—Hematologic course of a patient with chronic lymphocytic leukemia (Case 13) treated with TEM. Associated with the decrease in the leukocyte count there was reduction in the size of cervical and axillary lymph nodes.

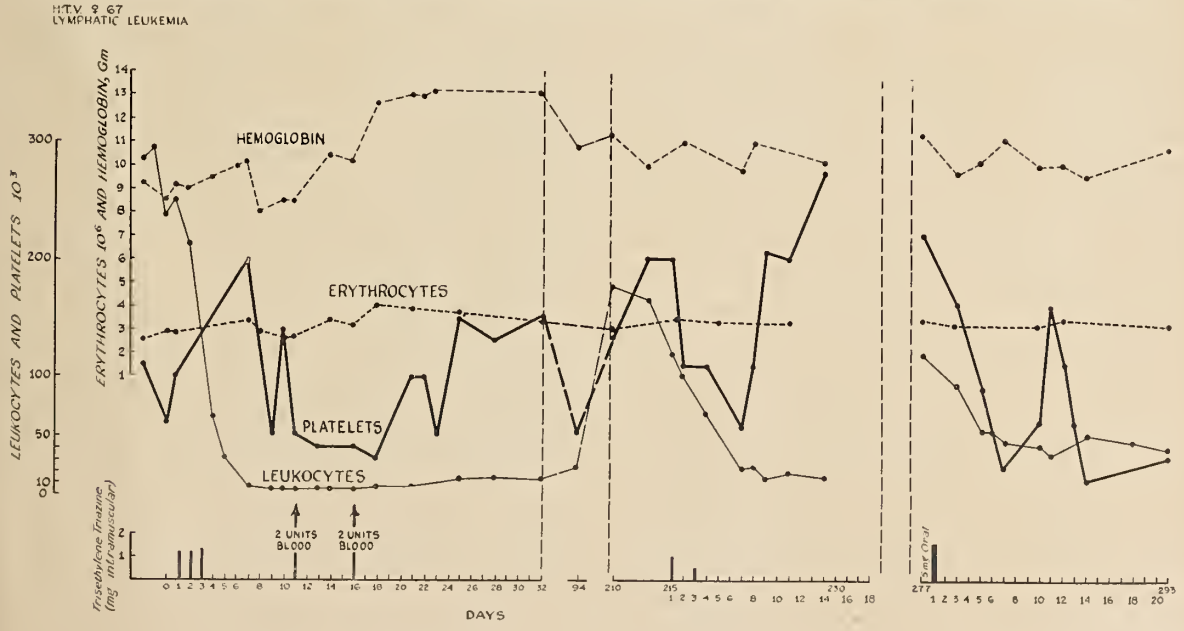


TABLE 2.—*TEM in Patients with Neoplastic Diseases Other than Lymphomas*

Case	Sex and Age	Diagnosis	Route*	Days Treated	Total Dose	Dose (mg./kg.)	Effect on Tumor
19.	M 54	Carcinoma nasopharynx	IV	3	28	0.5†	None
20.	M 71	Carcinoma nasopharynx	O	3	15	0.28	None
			O	1	15	0.28	None
21.	M 42	Carcinoma lung	IV	5	12.5	0.28	None
22.	M 36	Carcinoma lung	IA	1	10.0	0.21	None
23.	M 28	Carcinoma testis	IM	7	4.9	0.10	Minimal‡
			IM	2	1.4	0.03	None
24.	M 28	Carcinoma testis	IV	1	9.0	0.15	None
25.	F 51	Carcinoma breast	IM	7	6.5	0.10	None
26.	M 46	Carcinoma kidney	IV	1	10.0	0.14	None
27.	F 38	Melanoma	IM	3	14.0	0.25	None
28.	F 48	Melanoma	IV	1	11.0	0.20	None
29.	M 18	Osteogenic sarcoma	IA	1	15.0	0.25	None
30.	F 2	Wilms's tumor	IA	1	2.6	0.20	Minimal‡
31.	M 5	Neuroblastoma	IA	1	4.0	0.25	None
32.	M 26	Thymoma	IV	3	9.0	0.15	Minimal‡
			IV	2	6.0	0.1	

* IV—Intravenous; IM—Intramuscular; O—Oral; IA—Intra-arterial.
† This dose is fatal.
‡ Slight decrease in size of tumor masses for few days. All patients have died.

14 additional patients received treatment with TEM. No beneficial effects were observed. There was minimal but definite decrease in the size of the neoplastic mass in one patient with a teratocarcinoma of the testis, and in one child with a Wilms's tumor to whom TEM was administered through a catheter placed into the renal artery.[1] These effects lasted less than one week in each patient. In one patient with a thymoma which produced partial obstruction of the superior vena cava, treatment with TEM was followed by a reduction of the venous pressure from 28 to 12 cm. of water for approximately one week.

PATHOLOGY

Of the 32 patients in this series, nine of 18 patients with lymphomas, and all of 14 patients with other neoplasms have died. Necropsy was done in 21 of the 23 cases. The pathologic observations were similar to those in mice injected with TEM, and to those in patients following treatment with HN2.[12]

The changes in the tissues were dependent upon the dose of TEM administered and upon the time after the course of therapy. In general the cytotoxic effects were best noted in the bone marrow, the spleen, and to a lesser extent in lymph nodes.

No changes specific to the drug could be identified in the bone marrow earlier than one week following treatment with TEM. The most pronounced changes in the bone marrow were observed in cases in which autopsy was done between two and five weeks following the last course of therapy with TEM. The extent of the changes was in proportion to the dose of the agent. With doses of 0.25 to 0.5 mg. per kilogram of body weight there was complete disappearance of the cell elements. In the marrow the background was composed of remnants of supporting stroma, somewhat disrupted sinusoidal walls and small islands of an eosinophilic-staining, mucinous-appearing material, probably extravasated serum. Occasional pyknotic nuclei and primitive cells were observed in this completely aplastic marrow (Figure 1). Approximately seven weeks following therapy with doses of 0.25 mg. per kilogram of body weight the marrow was hypercellular. There were no changes in bone trabeculae, and there was no increase of connective tissue in the marrow.

In the spleen the changes followed a somewhat similar pattern, the lymphocytes being specifically involved. With doses of TEM above 0.25 mg. per kilogram of body weight, the earliest changes were

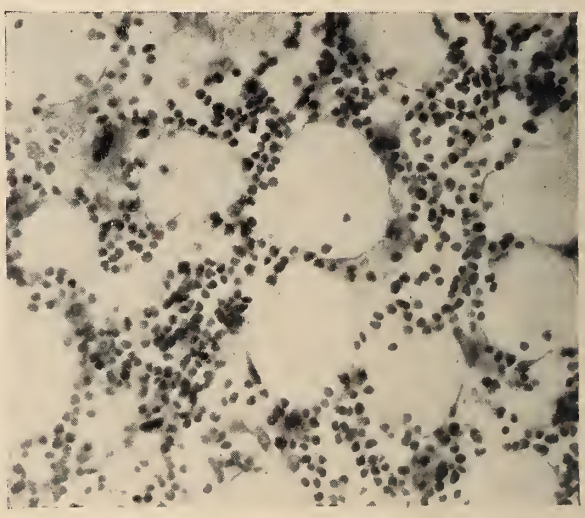


Figure 1.—Bone marrow of patient with epidermoid carcinoma of nasopharynx (Case 19), who died 11 days after receiving TEM, 0.5 mg. per kilogram of body weight, intravenously. Marrow elements are represented by a few large primitive cells in the stroma between fat cells; most of the remaining cells are erythrocytes. Hematoxylin- and eosin-stained. (X 320)

manifested by focal areas of necrotic tissue involving the tissue of a few Malpighian corpuscles (Figure 2). Within three weeks there was loss of lymphocytes from all of these areas, so that only the central arterioles remained. Considerable disruption of the red pulp, probably as part of the hemorrhagic diathesis, was also encountered. Later in the process the extravasated blood apparently degenerated and the pigment was contained within macrophages. Fibrous tissue proliferation occurred in the area of former lymphoid tissue. In other cases, in which smaller doses of TEM were given, no residual changes attributable to previous injury were observed in the spleen.

A few lymph nodes not replaced by tumor tissue were available for study. During the acute stages the lymphoid centers disappeared, the area consisting of the supporting stroma. Along with this there was considerable hyperplasia of the reticulum elements, many of these cells filling the sinusoids (Figure 3).

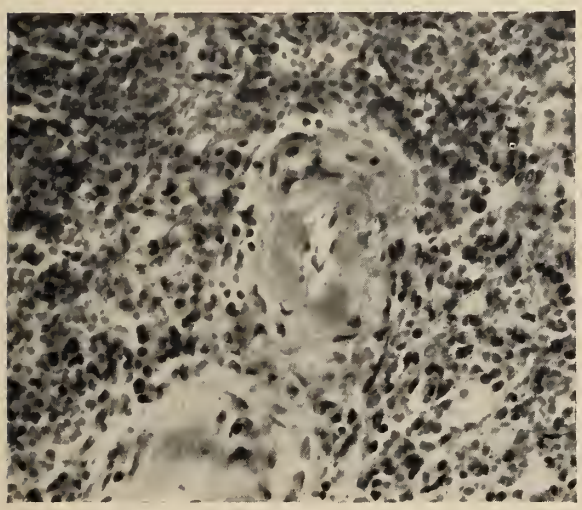


Figure 2.—Spleen of the patient in Case 19. Only a few lymphocytes remain of the lymphoid follicle and there is much extravasated blood in the pulp. Hematoxylin- and eosin-stained. (X 320)

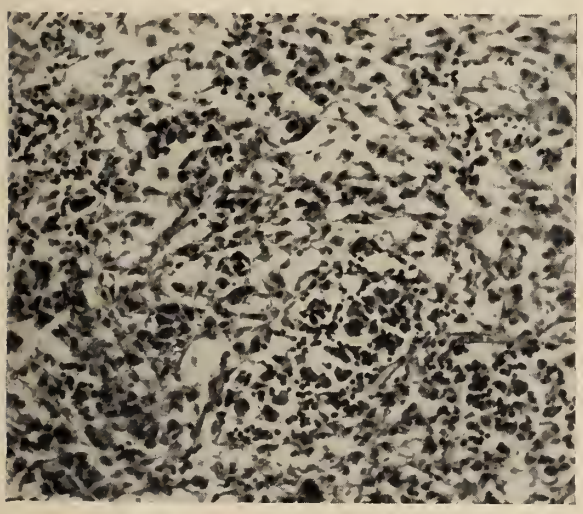


Figure 3.—Lymph node of patient with melanoma (Case 28) who died seven days following 0.2 mg. of TEM per kilogram of body weight, given intravenously. Lymphoid follicles are represented by a few groups of pyknotic lymphocytes and reticular cells form the bulk of the tissue. A group of melanoma cells appears in the lower center. Hematoxylin- and eosin-stained. (X 160)

An interesting change was observed in one patient with Hodgkin's disease (Case 6) who died during the stage of bone marrow regeneration. In the submucosa of the small bowel were masses of plasma cells in areas usually containing many lymphocytes. No specific changes were observed in the gastrointestinal tract in other cases.

In the patient who received TEM in a dose of 0.5 mg. per kilogram of body weight (Case 19), in addition to the extreme effects upon the bone marrow and the spleen there were hemorrhages into the pulmonary alveoli and on serosal surfaces and mucous membranes. There was complete arrest of spermatogenesis in the testes.

In many cases necrosis of the tumor was a prominent feature. However, since this is also observed at autopsy in untreated cases, it could not be ascribed specifically to the drug. No cellular changes could be identified, and focal areas of the type described by Spitz[12] in tumors of the lymphoma group following therapy with nitrogen mustard, were not observed.

DISCUSSION

The clinical results of the present investigation of TEM are in agreement with the results reported by other groups.[8, 13] Rhoads and co-workers[8] studied 15 patients with Hodgkin's disease treated with TEM given orally. Fourteen of them had improvement. Two patients who had pruritus were relieved, and high fever was controlled for up to six weeks in two additional patients. The usual duration of improvement was six to 12 weeks. Objective improvement was also observed in three of four patients with myelocytic leukemia and in three of six patients with lymphocytic leukemia, but two patients with lymphosarcoma did not respond. One patient with mycosis fungoides and one with plasma cell myeloma also did not improve.

TEM appears to be a drug of some clinical usefulness in the same conditions in which nitrogen mustard is of some value: Hodgkin's disease, lymphosarcoma, lymphatic leukemia and perhaps other lymphomas. The remissions of the disease are of short duration, and no evidence is available that the life span is prolonged. The pharmacologic and toxicologic effects of TEM are in general the same as those of nitrogen mustard. The advantages of TEM as compared with HN2 are as follows: (a) TEM can be given intramuscularly and orally as well as intravenously, thus obviating the occasional complication of phlebothrombosis produced by nitrogen mustard. The oral route of administration also allows more continual and more regularly spaced treatments than are perhaps possible with nitrogen mustard. (b) TEM produces much less nausea and vomiting than does nitrogen mustard. Headache and diarrhea are also reduced. Two patients of the present series refused any further therapy with HN2 because of

severe reactions of vomiting and headache, but were satisfactorily continued on TEM.

There are also definite disadvantages of TEM as compared with HN2: (a) TEM has a narrower chemotherapeutic range than nitrogen mustard. With TEM given parenterally, 0.5 mg. per kilogram of body weight is fatal, and a single course should not exceed 0.25 mg. per kilogram of body weight. With oral administration, 0.4 mg. per kilogram of body weight, given in daily doses of 5 to 10 mg., appears to be the upper level of safe dosage for a single course of approximately one week. (b) Lymphocytic leukemia appears to be extremely sensitive to TEM. The first course, given intravenously or intramuscularly, should not exceed 0.05 mg. per kilogram of body weight, and oral dosage should not exceed 0.1 mg. per kilogram of body weight. This caution is applicable not only to lymphocytic leukemia with frank leukemic blood picture but also to subleukemic lymphocytic leukemia and to lymphosarcoma with bone marrow involvement. (c) The ease of administration of TEM, particularly orally, and the minimal immediate reactions are hazards as well as advantages. The severe effects on the bone marrow and the narrow chemotherapeutic range make imperative the closest clinical and hematological observation for at least three weeks following the termination of the therapy.

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Attitudes Toward the Dubious Compensation Claim

CHRISTOPHER LEGGO, M.D., *Crockett*

SUMMARY

Laws providing for compensation of workmen for occupational injury are a powerful socio-economic force.

In settlement of compensation claims the goal, difficult to achieve, is fairness to employee, employer and insurance carrier. Often, medical, legal, economic and social considerations conflict with one another. A "fact" in one field may not be considered so in another.

Since medical data and testimony often guide the ultimate decision of a compensation claim, the physician's attitude is a large factor not only immediately and directly in determination of the case at hand but, perhaps more important, in the ultimate direction of the socio-economic forces which spring from the sum of all such determinations.

To perpetuate the good in workmen's compensation laws, the next generation of physicians—and of lawyers and business administrators as well, for they, too, are involved—ought to have basic training in the social sciences in order that they may have a broad rather than a segmental view of the problems with which they deal.

WORKMEN'S compensation laws have, in four decades, resulted in initiating powerful forces which have altered and are continuing to alter the economic status, the sociological relationships, and the systems of belief of the entire employed population, all employers, all insurance carriers, and large segments of the medical and nursing professions. It is probable that the magnitude of these changes has not yet been fully realized, and that most of the forces contributing to the total changes have not yet reached their ultimate effect.

It may be a generation before the social scientists will present a truly complete and objective account of the interacting forces which are profoundly affecting the total employed population in the United States. The object of this presentation is to offer some tentative opinions which may be of assistance in orienting physicians in this still changing pattern of social forces.

One of the first states to have such laws, California passed its first Workmen's Compensation Insurance Act in 1911. In its present form, under the extensive revision in 1917 of a more comprehensive act adopted in 1913, it is one of the most liberal laws in the 48 states, allowing unlimited medical care, provides relatively high compensation indemnity, includes coverage of "aggravation of a preexisting condition," and resolves doubt in favor of claimants. The word "injury" applies to any occupational disease. These liberal factors are generally accepted as being positive values and worthy of perpetuation.

This presentation will point out some trends which are believed by many observers to be inimical to the best long-term interests of the act and its beneficiaries, as well as to the medical profession, and will offer some explanations as to the origin of those trends. The words "liberal" and "liberalization," which have no fixed value, will be used frequently, and the reader must assess the values to be attached to the words according to their application in the text.

One has but to be familiar with the compensation laws of some other of our 48 states to recognize that California has indeed a liberal compensation act. Some states, for instance, limit the total cost of medical care to some sum such as $500, an amount which can be used very readily in two or three days of hospitalization for serious injury. Californians may be justly and properly proud of this liberal act. There is no intent here to criticize the California Workmen's Compensation Act or to appeal for a return to the "good old days." The good old days before the compensation laws existed were most certainly not so good for the injured employee. How bad they were is beyond the memory of the present younger generation. Industrially injured employees did not have even a remotely fair opportunity of being restored to health or of being supplied with sustenance without a court fight in which both the common law defenses and the court procedure were hurdles which they could seldom overcome.

Legal and claims authorities state that the act is administered under a philosophy described as "liberal interpretation of the law." The liberality of the act and the liberality of its interpretation are clearly and interestingly documented by Thomas.[1] chief counsel of the State Industrial Accident Commission, San Francisco, who noted that it "became the social policy of California to provide a means whereby substantial justice could be accomplished in all cases expeditiously, inexpensively, and without encumbrance. As part of that policy, it is provided by law that the benefit of any doubt must be given to the injured employee."

Most Americans, be they physicians or laymen, understand that fellow citizens in an unfortunate situation are customarily given the "benefit of any reasonable doubt." When it becomes more generally understood that under the compensation act—

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as currently interpreted, at least, by the Industrial Accident Commission's counsel—the claimant must be given the benefit of "any doubt," a partial explanation will be supplied for awards in favor of applicants whose claims appear rather dubious.

A more complete explanation of awards which sometimes puzzle physicians lies in the statement made frequently by compensation authorities but difficult to find in print—in medical literature, at least — that the compensation law is administered not only with "liberal interpretation of the law," but also with "liberal interpretation of fact." Thomas illuminated this point in a continuation of the paragraph already quoted: "Likewise, since the applicant in proceedings before the Commission is frequently an injured employee acting on his own behalf without legal aid, the rules of evidence were relaxed for his benefit. Therefore, in proceedings before the Commission the technical rules of evidence, particularly the hearsay rule, are not enforced, and rather wide latitude is permitted. The injured employee cannot be expected to procure medical reports from experts or specialists, but generally must rely upon reports of his family doctor or an attending physician who may not have the facilities for preparing an elaborate report. Consequently, injured employees are given benefits and considerations which are not accorded plaintiffs in the civil courts."

Illustration may help toward understanding that paragraph. Most physicians who have treated any appreciable number of industrial injuries are familiar with cases in which disease, not necessarily nor even usually caused by trauma, is demonstrated and disability exists—and yet there has been nothing in the history to account for any causal relationship between the employment and the disease. Moreover, there may have been repeated denials to the attending physician and to consultants, and to representatives of claims departments, of any accident, incident or event — and these denials may have been repeated many times over a period of many months. The award, when finally granted after a hearing before the Industrial Accident Commission, is based on the "fact" that the claimant at his hearing recalled a specific incident on a specific date at a specific time—not one detail of which had been recalled previously, but on the contrary had been denied many times previous to the hearing. This is a simple example of the "liberal interpretation of fact."

The same "liberal interpretation of fact" is applied to symptoms. A claimant with an apparently healed fracture in perfect alignment, causing no demonstrable disability of any kind, and described as "well" in the final clinical note, may be granted an award on the basis of a statement of pain or of some other complaint which cannot be verified.

Most California readers are familiar with the "aggravation of preexisting condition" clause, and it is not necessary for their benefit to elaborate on the statement that this clause is being interpreted much more liberally than in the 1930's.

To illustrate the increased liberality in the administration, Thompson[2] discussed myocardial infarction. Referring to liberalization by statute he stated, "The so-called Presumptive Act of the State of California is such that heart disease or pneumonia developing in any fireman or policeman is accepted as an industrial illness unless unequivocably proved otherwise." Also pertinent is Thompson's statement: "It has been pointed out that from the standpoint of industrial medicine the acceptance or the nonacceptance of the industrial origin of an injury or an illness is determined by the legal profession and public opinion, as this is carried out by the administration at state and possibly national levels. The gradual inclusion of more and more clinical conditions as industrial injuries is well known to all of us and the example of myocardial infarction is used to illustrate the progress being made toward this end."

This underscores the pressure on the practicing physician of today to ignore the application of scientific knowledge of etiology, and instead of offering a sound medical opinion which he should be qualified to express, to substitute an unsound legal opinion which attempts to anticipate the currently fashionable decisions of the Industrial Accident Commission. These are indeed unstable criteria on which to base a diagnosis. If the physician chooses to continue to express a medical opinion based on sound medicine, he risks being publicly overruled as being antagonistic to the patient's welfare and out of harmony with the philosophy of the administrative body to which the report will be presented — and appearing to have caused treatment to be delayed until after the hearing. If he attempts to compromise between sound medicine and fashionable decisions, he will undergo a frustrating experience.

It is because of these situations that the physician appears to have a most legitimate interest in the philosophies of compensation claims administration. Medical principles dictate a scientific approach to the facts, and these facts if well established medically may not be distorted or altered because of expediency. This is of vital importance to the physician, and is of vital importance to the practice of medicine. More on this later.

If it be stipulated that a liberal compensation law is being administered with liberal interpretation of the law and liberal interpretation of fact, is there a reasonable explanation as to why this compounding of liberalization has come about?

A most plausible explanation is at hand when one considers that there are three classes of unemployed persons for whom relief by law has been made available. These three classes are:

1. Those who are unemployed because of industrial injury.

2. Those who are well but for whom employment is not available.

3. Those who are unemployed because of nonindustrial disability.

Relief by law in California has been supplied for all three classes in the order in which they have been listed above. The Workmen's Compensation Law for the relief of industrial injuries was passed originally in 1911 (financed at employer's cost); relief for the unemployed through the State Unemployment Insurance Act was enacted in 1938 (at present financed at employer's cost); and the Unemployment Disability Insurance for persons with non-industrial disability became effective in 1946 (at employee expense unless the employer elects to contribute).

For 35 years — from 1911 to 1946 — a disabled claimant appearing before the Industrial Accident Commission was either granted an industrial award, or he was left dependent on his own resources, in the lack of which he became indigent. This constituted such a powerful appeal to administrators that it was difficult to feel that any great over-all social injustice was done if considerable latitude and liberality were exercised in classifying many extremely dubious claims as being industrial.

In other words, liberality of interpretation both of the law and of the fact appear to have sprung up for very natural reasons and as an inevitable reaction to fill the vacuum created by need. Insofar as the vacuum is now at least partly filled by the current Unemployment Insurance and Unemployment Disability Acts, the social justification for overliberalization (if such has existed) should be in diminuendo. Some social pressure for liberality may still exist if decisions are influenced because the benefits of the Compensation Act are considerably greater than those of the Unemployment Disability Act and because it is employer rather than employee funds which are to be expended under the compensation award.

If it be granted that these rather superficial, oversimplified observations are correct, one may legitimately ask why they concern physicians.

One very profound effect of the introduction of the compensation law has been to alter the doctor-patient relationship by the introduction of the third party. In compensation cases, this third party is the employer, to whom is usually added the fourth party —the insurance carrier; and in the disputed claim there is the fifth party, the Industrial Accident Commission.

Patients with industrial injuries seem, on the basis of their attitudes, to be of three classifications:

A. Those whose ability to work is viewed realistically in terms of the actual physical disability, job requirements, and the therapeutic needs. (This is the normal, healthy attitude.)

B. Those whose emotional attitudes cause resistance to work, which the actual physical disability does not justify. (This is unhealthy and is generally recognizable, at least when it exists in considerable degree.)

C. Those whose emotional drives to work are so strong that their insistence on working is unrealistic in terms of actual disability, of job requirements, or of therapeutic needs. (This may be more frequent than is recognized and, at least in its extreme, may —like attitude "B"—be unhealthy.)

Also, parenthetically, it should be remarked that a patient does not necessarily stay in the same class during the entire length of the claim. Occasionally, the intrinsic mental dynamics of the patient will undergo a change. At other times either skill or awkwardness in the physician's handling of the patient or in the layman's processing of the claim will alter the attitude. This is important as a reminder that efforts should be directed to maintain the healthy attitude of the one class, and to alter beneficially the attitude of the other two.

Ordinarily, the compensation cases of patients in Class "A" do not constitute a major problem in medical or claims administration. Neither do patients in Class "C" usually find it necessary to become involved in any type of dispute to obtain their rights. In Class "B" fall the majority of cases which cause the greatest difficulty in the diagnostic, the therapeutic and the claims field. When awards based on expediency are granted, the beneficiary is most likely to be one of this group.

A full discussion of all the possible dynamics which cause patients to fall into Class "B" is not within the scope of this presentation. It might be mentioned, however, that in this class may be found those who carry hostilities or anxieties of any kind, or are insecure from any cause. The dependency on a compensation award may lie in a work situation to which the claimant is poorly adjusted and from which he wishes to escape, or it may be a reflection of a basic inadequacy totally unrelated to any work situation. Occasionally, one can clearly discern the effect of what Freud describes as "the advantage of an illness," but since the economic, the social, and the psychic maladjustments may be so interwoven, skilled psychiatry may be required to accurately uncover the mental dynamics causing the dependency. It is the author's belief that a well integrated person is seldom found in Class "B," and, if found, that he will seldom remain in that category for long. Also, it is probable that patients can be removed from Class "B" and promoted to the healthier Class "A" in direct ratio to the psychiatric or psychosomatic interest and skill of the attending physician. Laymen also—be they supervisors, employers, claim agents, business agents or any others involved in the handling of the claim or in contact with the claimant—may materially affect the claimant's emotions to his benefit or detriment.

As a subject for practical research for both physicians and social scientists, the thorough and complete study of Class "B" should offer an interesting challenge. The social scientists involved in such a thorough study should include those versed in the practical aspects of the disciplines of economics, psychology, sociology and cultural anthropology to supply all the contributions necessary to analyze the environmental pressures causing the psychic or psychosomatic phenomena.

Granted that such a study, if thorough, would be an ambitious long-term project, its contribution to justice in determining claims should be tremendous. Of course, with varying degrees of success, there are efforts now to present a complete picture of individual cases, but the Commission is still too frequently compelled to depend upon the use of intuition in rendering a decision. Although it seems improbable that all the sciences collectively will ever abolish the need for intuition in forming a judgment, the necessity for its use in considering claims may be greatly minimized if the potentialities of a cooperative study by the social sciences are ever realized.

The well recognized so-called "arbitrary award," very closely related to or synonymous with the intuitive award, perpetuates itself and multiplies by inviting more claims which result in more awards of a similar character—and there is now a well-planted common belief that any claimant who has been injured is "entitled to something" over and above medical care and compensation for the period of temporary disability.

To return to the subject of "liberalization of fact," the author believes that medical statements as to cause and effect (the etiology of the pathologic condition) must be based on medical facts and medical principles, and that these facts may not be stretched or altered because of expediency. The house of medicine will collapse entirely if the study of causes—one of its cornerstones—is to be subject to personal or social expediency. When the weight of medical authority states that beyond a reasonable doubt a given clinical syndrome is "X" disease, it would seem only reasonable that this and all identical cases should be invariable classed as "X" disease. When the administrative authorities of the state find it mandatory by statute, or expedient through interpretation of the law or through interpretation of fact, to render a decision which cannot be overruled by any court that a claimant who has what is described medically as "X" disease really has "Y" injury instead, a chain reaction is begun which will have serious long-term effects on the practice of medicine—and this event should cause concern.

It is not to be denied that individual physicians have contributed to these decisions which physicians collectively deplore. The Industrial Accident Commission must have some justification for its decisions and usually, if not always, there is a report from some physician which either intimates or states that "X" condition might be "Y" injury. It is not unusual to see a two-page medical report describing "X" condition ending with one sentence saying in effect, "Of course 'Y' injury is possible." Frequently the medical examiner is unconsciously ambiguous and he is unaware that a single sentence has nullified the intent of his entire report. In other cases, however, he may deliberately — due to an understandable sympathy for the patient—go out of his way to assist the patient to the extent of indicating an impossible medical situation. This contributes most materially to making it possible to reach a legal finding that asserts what may well be a medical impossibility. The medical profession must not adopt too self-righteous an attitude toward those who sacrifice principle to expediency, because physicians are not unanimously immune to this powerful influence.

It has frequently been advocated that a medical board be established within the Commission to evaluate the medical aspects of all claims. This procedure is established in some other states, and its proponents claim it has practical value as well as theoretical merit.

Those who profit by awards through expediency should not, in the long term, suffer loss if the tide is reversed and principles become paramount over expediency. Expediency which wins benefits through social pressure can ultimately work against present beneficiaries when the pressure of expediency becomes great enough from another quarter. It would seem fair to state that long-term, consistently fair, uniform distribution of benefits will be assured only if all concerned—administrator, physician and beneficiary — understand the fundamental principles involved, honor them, and respect the procedures established and based upon them. The tenure of the personnel on today's scene is limited, at the longest, to a lifetime. Viewed over this relatively short span, the long-term effects of expediency versus principle may not seem serious. Respect for the long-term true interest of whatever administrative, professional, or labor group to which any of those concerned owes allegiance, seems to dictate a conscientious recognition and honoring of sound principles.

The attitudes of the injured, the Commission, and the physician have been discussed in some detail. That the other groups equally involved in claims settlements — the employer, the insurance carrier, and the labor union — have been mentioned only casually does not mean that they are detached from the situation. In their own areas they are subject to similar conflicting pressures of expediency versus principle.

In any situation involving conflicts of beliefs and attitudes between groups, the social "law of the vicious cycle" operates, and either regression or improvement in the attitudes of any of the parties concerned will influence the position of all other interests. Since the Industrial Accident Commission, the clearing house for all claims, is in a position of greatest leverage to change attitudes toward dubious claims, its part in the total situation has been stressed.

There is question whether the dominance of expediency over principle, insofar as it be evident in the compensation insurance field, is a problem primarily of this one field. It seems proper to suggest that the phenomenon is merely a reflection of a nationwide pattern extant in all areas of American life.

The first social security program of the compensation insurance type was introduced in Germany at the time of Bismarck, and it was 60 years before its costs showed any appearance of beginning to level. The costs in California have risen very much

more rapidly in much less time, and the upward trend seems to be proceeding with little diminution of speed.

Social scientists, in personal discussion, have pointed out that the Germans—at least during the period referred to—had a rather universal respect for authority, both individual and institutional. The modern American attitude, on the other hand, was contrasted as being increasingly, for at least 40 years, in conflict with authority (or restrictions by authority) of any type—whether it be personal or institutional, governmental or corporate, temporal or religious. The old-time principles of personal integrity have been giving way to the motto "It's all right if you can get away with it" on all levels of American life in too many areas of social existence.

At the same time there has developed, at the administrative level, a generally enlightened attitude toward socio-economic obligations. This has resulted in accelerated programs of supplying, directly or indirectly, financial assistance for many groups previously neglected. These programs have, in one generation, resulted in an entirely new concept by administrators—be they at national, state or county levels—toward the distribution of expendable funds, whether they be public or corporate. The continuation of such enlightened programs must inevitably depend upon public support. Factors which weaken public support may be economic, social and political. In the administration of all such programs, it should be borne in mind that public resistance, always present in some degree, may swell to great proportions if sparks of economically or socially justified criticism be fanned by strong winds of political prejudice. The "all or nothing" principle then would apply, with partisans divided into "all for it" or "all ag'in' it" groups. A careful approach to the whole problem on a deeper basis, with study of each individual facet of the total situation, should be of great service in insuring perpetuation of the positive values in a soundly liberal Workmen's Compensation Insurance Act.

Most administrators, physicians and lawyers have not been sufficiently trained in the basic fundamentals of the social sciences to adequately understand and anticipate—let alone alter—social forces of the magnitude, and with the momentum, of those set in motion by workmen's compensation laws.

The present generation has two courses open. The first is for each to confine his efforts to his purely professional role, permitting the ultimate pattern of compensation to take shape as it will. The second course is for us, to the extent of our ability, to orient ourselves in the basic principles of economy, clinical psychology, sociology and cultural anthropology, and be better—if not thoroughly—prepared to influence the trends in compensation insurance. We will have valuable assistance in this if we step out of our ivory towers of practical experience, knock on the doors of the halls of learning and invite the interest of those who have the academic knowledge of these disciplines, but who now, too frequently, are isolated behind the ivy-covered walls.

And to the practitioners of professions in the next generation we should offer a better choice than either to ignore the social implications of their life work or to awkwardly grasp for belated help. We ought to insist that our educational institutions make basic courses in the social sciences mandatory for students of business administration and for the premedical and prelegal students. If this is done, the next generation may—with greater facility—improve and perpetuate present means of financial aid, medical care and rehabilitation for the injured workman.

California and Hawaiian Sugar Refining Corporation.

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CASE REPORTS

- Pheochromocytoma
- Dermoid Cyst of the Omentum
- Bronchiogenic Cysts
- Circumcaval Ureter

Pheochromocytoma

Report of a Case with Preoperative Diagnosis and Removal Through Anterior Abdominal Incision

Stanley H. Hoffman, M.D., and
Wm. P. Longmire, Jr., M.D., *Los Angeles*

With the introduction of the "benzodioxane test" by Goldenberg, Snyder and Aranow[4] in 1947 and the "histamine test" by Roth and Kvale,[5] a means was provided of diagnosing the presence of epinephrine-producing tumors (pheochromocytomata) with a fair degree of accuracy, even in patients with persistent hypertension from the long continued effect of the secretion of such a tumor.

In a majority of reported cases, successful surgical removal of all pheochromocytoma tissue has produced a lasting restoration of blood pressure to normal. The following case is presented to illustrate a typical example of a pheochromocytoma diagnosed by the use of benzodioxane (933F or 2 piperidine - methyl - 1,4 benzodioxane) and histamine tests and removed successfully by way of a transverse anterior abdominal incision.

The patient, a 36-year-old white poultryman, was referred to Wadsworth General Hospital on May 10, 1949, because of hypertension. Blurred vision in the left eye had developed approximately six weeks prior to admission and blurred vision in the right eye three days before admission. Since 1943 the patient had had frequent headaches, described as throbbing in nature. Often during a severe episode of headache he would have a sensation of seeing blinding light, which was synchronous with each heartbeat. Frequently the headaches were accompanied by "cold sweats" and a sensation of trembling and shakiness.

The patient also noticed the gradual onset of dyspnea on exertion during the six months prior to admission. He had nocturia (two to three times) and, on one occasion, three months before admission, the urine was pink in appearance. There had been a weight loss of ten pounds during the previous six months.

PHYSICAL EXAMINATION

Upon physical examination the patient was observed to be well developed, moderately well nourished, and apparently not in acute distress. The temperature was 98.6° F., the pulse rate 110, and respirations 16 per minute.

The pupils of the eyes were round and equal and reacted to light and accommodation. Extraocular movements were normal. Papilledema was present in both eyes—one diopter in the right and two in the left. There was generalized and localized attenuation of arterioles and a two and one-half to one vein-artery ratio. There was mild arteriovenous compression and copper-wire appearance of the arterioles. Flame-shaped hemorrhages and cotton-wool exudates were observed throughout the fundi of both eyes. Visual acuity was 20/40 in each eye.

The heart rate was rapid and was in normal sinus rhythm. There was no cardiac enlargement to percussion. A coarse grade II systolic murmur at the apex was noted. The blood pressure was 160 mm. of mercury systolic and 120 mm. diastolic.

The liver was palpated about one fingerbreadth below the costal margin.

LABORATORY EXAMINATIONS

Results of laboratory examinations of the blood were reported as follows:

Erythrocytes	4,100,000
Hemoglobin value	82 per cent
Leukocytes	11,000
Neutrophils	65
Lymphocytes	31
Monocytes	1
Eosinophils	1
Basophils	2
Sedimentation rate	20 mm. in one hour
Urea nitrogen	34 mg. per 100 cc.
Sodium	141 milliequivalents
Potassium	4.5 milliequivalents
Chloride	100 milliequivalents
Urea clearance	31 per cent
Serologic tests	Negative for syphilis

Specific gravity of the urine in a Fishberg concentration test was 1.016, 1.020 and 1.016. There were 100,000 hyaline casts, 100,000 granular casts, 4,500,000 leukocytes, 3,100,000 erythrocytes, and 500,000 epithelial cells in a concentrated urine specimen (Addis method). In routine urinalysis, five to eight leukocytes per high power field, and a few fine and coarse granular casts, were noted. The reaction for albumin was three plus. Urinary protein excretion (Esbach method) was 0.84 gm. in 24 hours. In an electrocardiogram there was a small Q in V_1, flat T in AVF, low T_1 and T_2, flat T_3 and a small Q in V_4, V_5 and V_6. The tracing was interpreted as being abnormal but not diagnostic. An x-ray film of the chest was normal.

In an intravenous pyelogram (Figure 1) the right kidney was observed to be essentially normal. The left kidney was poorly visualized but no definite mass could be seen. Carmelin blue dye injected intravenously was excreted poorly by both kidneys.

BLOOD PRESSURE STUDIES

Pronounced variations were noted in daily blood pressure determinations. The range was from 152 mm. of mercury systolic and 92 mm. diastolic to 260 mm. and 160 mm. respectively. At the time the highest level was recorded, the patient complained of severe, throbbing headache. This

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Figure 1.—Intravenous pyelogram showing inadequate visualization of the left kidney. This was thought to be due to the presence of a pheochromocytoma on the left. However, intravenous pyelogram following operation was similar to preoperative film.

episode was accompanied by coldness of skin associated with cold perspiration covering the body, a "glassy-eyed" appearance, and a slightly dazed condition. These symptoms subsided after about an hour, at which time the blood pressure was 160 mm. of mercury systolic and 120 mm. diastolic. The patient stated that he had had numerous similar episodes. A benzodioxane test was done May 23, 1949. Twenty milligrams of benzodioxane was given intravenously. The blood pressure decreased from 174 mm. systolic and 124 mm. diastolic to 150 mm. and 78 mm. respectively within four minutes (Chart 1). Seven minutes later the blood pressure was 160 mm. systolic and 100 mm. diastolic. The test result was considered positive. On May 26, 1949, a Roth-Kvale test was carried out. The blood pressure at the time of intravenous injection of 0.025 mg. of histamine was 150 mm. of mercury systolic and 100 mm. diastolic. Five minutes later it was 240 mm. and 170 mm. respectively. At this time, the patient complained of headache; the skin was cold and clammy, and there was cold perspiration over the entire body. An ampule of benzodioxane was opened, but the drug was not given because the blood pressure began to decline. (See Chart 2.)

Upon massage of the abdomen in the region of the left adrenal gland the blood pressure rose from 142 mm. of mercury systolic and 92 mm. diastolic to 150 mm. and 94 mm. respectively. With massage of the corresponding position on the right side, the pressure rose from 140 mm. systolic and 96 mm. diastolic to 144 mm. and 100 mm. The changes in pressure were not considered significant. On May 31, 1949, three weeks after the patient was admitted to the hospital, bilateral exploration of the adrenal glands was carried out. The preoperative diagnosis was pheochromocytoma of the left adrenal cortex.

Chart 1.—20 mg. benzodioxane produced a pronounced fall in the blood pressure. Curve is consistent with diagnosis of pheochromocytoma.

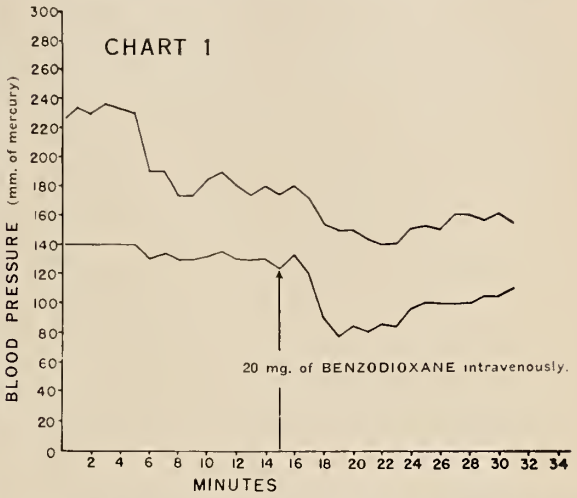
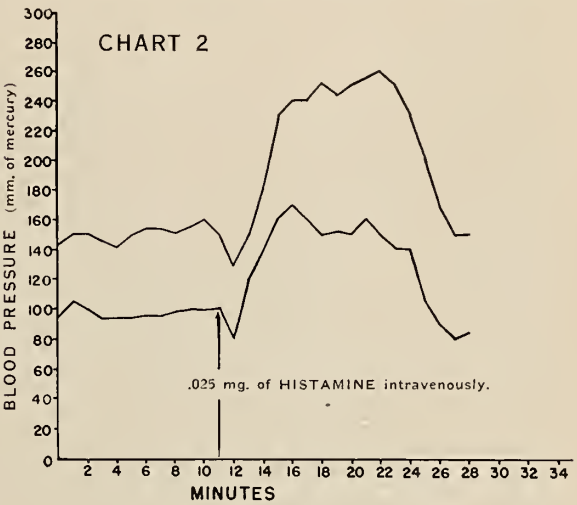


Chart 2.—Record of blood pressure following injection of 0.025 mg. of histamine, showing typical rise associated with pheochromocytoma.



OPERATION

The patient was anesthetized with cyclopropane and ether and the peritoneal cavity entered through a long, bilateral, subcostal, curved incision. The region of the right kidney and right adrenal gland was palpated; the right kidney was in normal position and of normal size. The right adrenal gland could not itself be identified, but there was no evidence of tumor in this area. In the region of the left kidney a mass, 7 to 8 cm. in diameter, was palpated. It lay along the upper pole of the left kidney, in the retroperitoneal space. The stomach was retracted downward and the lesser omentum incised in a direction parallel to the lesser curvature of the stomach. The left gastric vessels were rather long and it was possible to retract these to the right with a Deaver retractor. The lesser omental bursa and the tumor were exposed upon retraction of the lesser curvature of the stomach to the left. The peritoneum over the tumor was incised. The splenic vein and artery were identified and the pancreas, together with these vessels, was retracted downward, a procedure which exposed the anterior surface of the tumor. A large adrenal vein, about 7 to 8 mm. in diameter, coursed

along the lower anterior border of the tumor and entered the left renal vein. The anterior approach permitted excellent exposure of this vessel for ligation and division. During the period of manipulation of the tumor, the patient's systolic blood pressure rose to 220 mm. of mercury. This pressure was not affected by ligation of the large adrenal vein. The tumor was completely encapsulated and was readily mobilized by blunt dissection. Doubly clamping, dividing and ligating the overlying tissue and vessels freed all except the posterior-inferior surface of the tumor. The splenic flexure of the colon was mobilized and retracted medially. Geronta's fascia was opened and the tumor was approached from the lateral inferior surface. This area was mobilized without difficulty, and the tumor was delivered into the peritoneal cavity. The remaining pedicle of the tumor was divided and ligated. At this time there was pronounced decrease in the blood pressure, but at no time did the systolic pressure fall below 100 mm. of mercury. The lateral opening in Geronta's fascia was closed. The abdominal incision was then closed in layers with catgut and silk. The patient withstood the operative procedure well and his condition remained good throughout.

DESCRIPTION OF SURGICAL SPECIMEN

The specimen consisted of a rather flat, ovoid, encapsulated, brownish tumor mass, approximately 8 x 6 cm. in greatest dimensions and up to 3 cm. in thickness. The capsule had apparently been slightly torn in one area in the course of surgical removal. Remnants of yellow attenuated adrenal cortex extended over a portion of the surface, covering an area about 5 cm. in length. The sectioned surface of the tumor was dull brown and was studded here and there by pinpoint hemorrhagic flecks.

In microscopic examination of numerous sections, a rather uniform cytologic pattern composed of large, polyhedral or spindle-shaped chromaffin cells was noted. The chromaffin cells contained abundant, finely granular cytoplasm which stained a peculiar dark magenta with hematoxylin and eosin. The tumor tissue was permeated by smaller and larger congested blood channels and it was mainly about these vessels that the whorls and bundles of tumor cells appeared to be oriented.

In one of the sections, residual adrenal tissue upon the surface of the tumor was observed. This tissue was composed largely of cortex, but did contain a compressed central strip of medullary tissue, the cells of which resembled those of the neoplasm.

The pathological diagnosis was pheochromocytoma of the adrenal medulla.

POSTOPERATIVE STUDIES

The patient received five milligrams of desoxycorticosterone acetate the day before operation. During the operative procedure, he received 1,000 cc. of blood intravenously and 10 cc. of Eschatin® intravenously immediately following the removal of the tumor. Epinephrine in oil was administered on six occasions during the first two postoperative days. The patient also received 10 to 20 cc. of Eschatin daily for one week postoperatively.

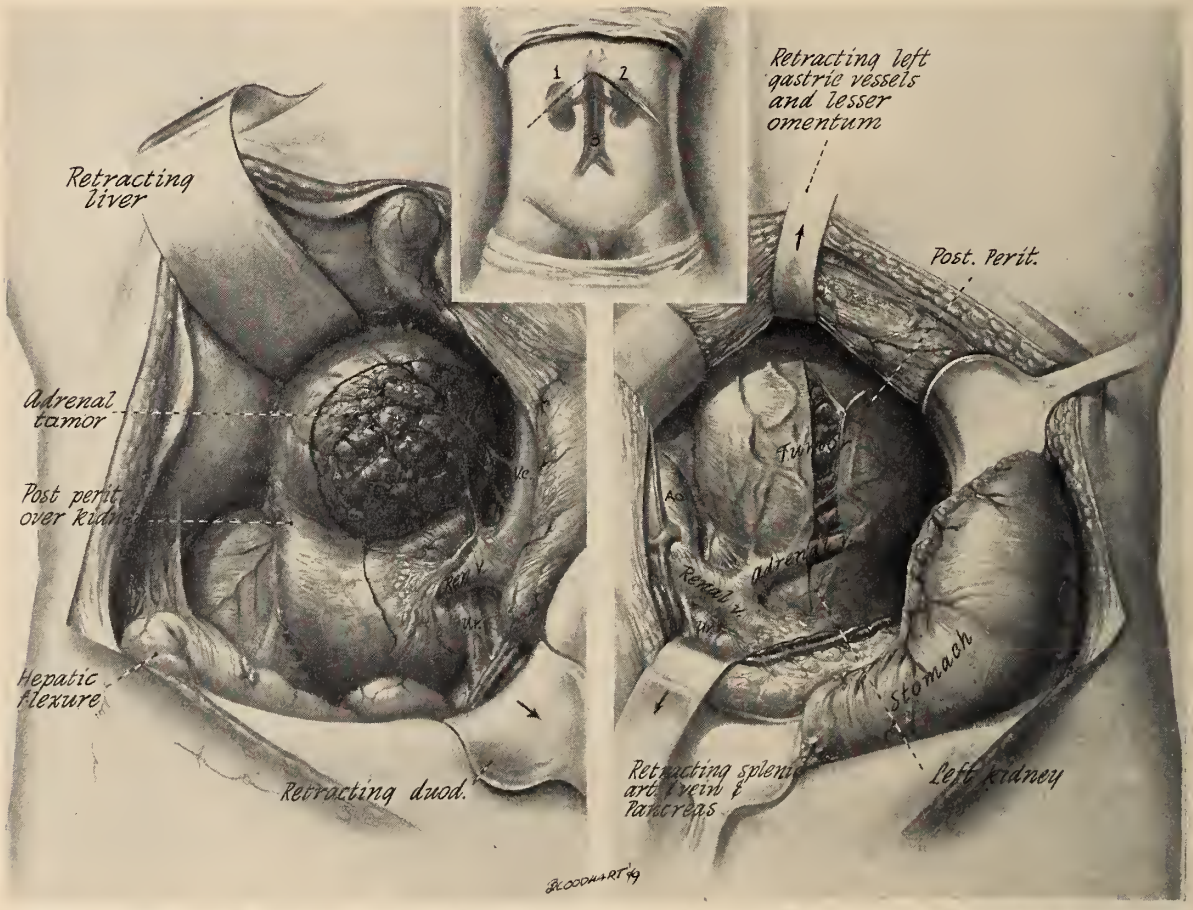
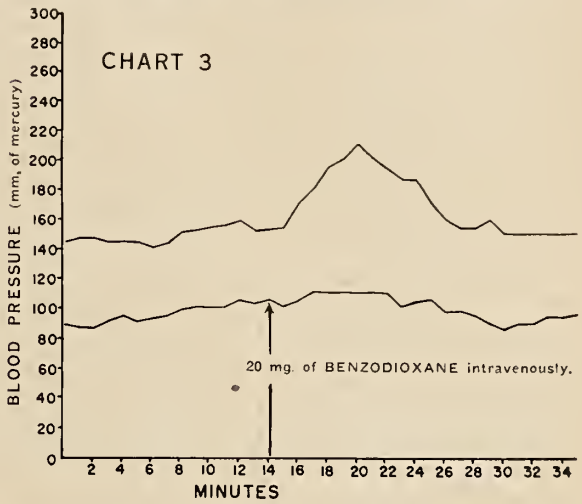


Figure 2.—Exposure of adrenal area through subcostal incision. *Left*—subcostal incision used in case reported, indicating exposure of tumor. *Right*—artist's conception of similar tumor of right adrenal gland exposed through right subcostal incision.

Following the patient's recovery from the operation, the blood pressure continued to be somewhat elevated, ranging from 140 mm. of mercury systolic and 80 mm. diastolic to 160 mm. and 100 mm. respectively. Urea clearance, determined June 20, 1949, was 72.5 per cent. Urea nitrogen in the blood was 14 mg. per 100 cc. A benzodioxane test was performed June 25, 1949. The blood pressure was 150 mm. of mercury systolic and 100 mm. diastolic before benzodioxane was given. After intravenous injection of 20 mg. of benzodioxane the blood pressure rose to 210 mm. systolic and 110 mm. diastolic and then gradually returned to 142 mm. and 90 mm. over a period of 15 minutes (see Chart 3). This was considered to be a rather typical response of essential hypertension. In an examination of the eyes on August 16, 1949, pronounced improvement was noted. There was no papilledema present. Although minimal constriction of some of the veins at arteriovenous crossings was observed, there was no deflection of the veins. There was some residual evidence of absorbing hemorrhage in both eyes. Cotton-wool exudates were not present. There were only minimal sclerotic changes in the retinal arterioles. Visual acuity in the right eye was 20/30, and in the left eye 20/30. An electrocardiogram was normal. Specific gravity of the urine (Fishberg concentration test) on August 16, 1949, was 1.021, 1.023, and 1.016. Results of urinalysis were normal. The urea nitrogen content of the blood was 16 mg. per 100 cc. The left kidney was poorly visualized in an intravenous pyelogram.

When last observed, five and a half months after operation, the patient was completely asymptomatic and was working eight hours a day. Blood pressure with the patient sitting

Chart 3.—Postoperative test with benzodioxane showed elevation of blood pressure, suggesting complete removal of pheochromocytoma. Response was one usually seen in essential hypertension.



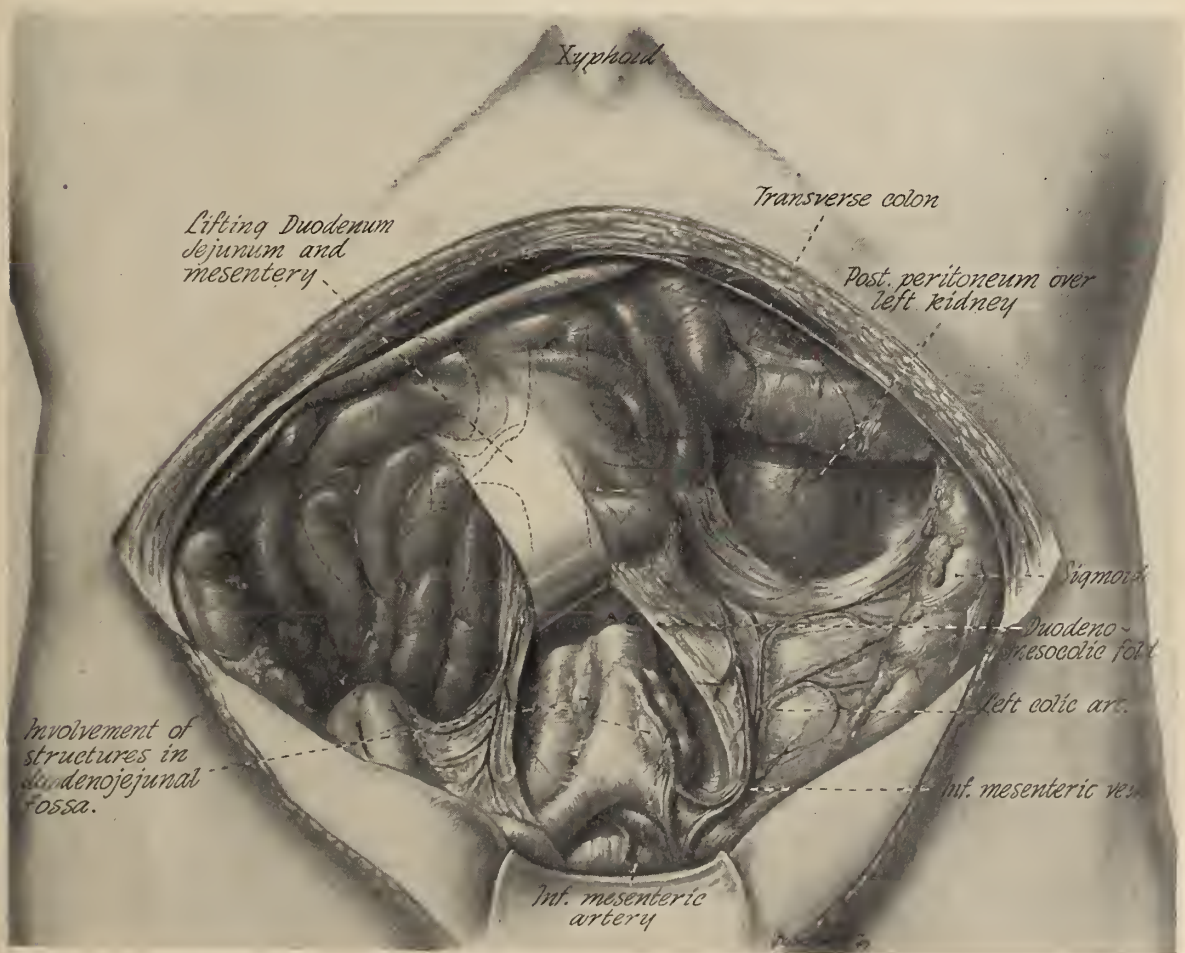


Figure 3.—Artist's conception of bilateral subcostal incision for exploration of suspected tumors of Zuckerkandl's bodies.

was 120 mm. of mercury systolic and 85 mm. diastolic; with the patient standing, 140 mm. and 100 mm. respectively. The slight hypertension which has persisted is probably secondary to the renal damage which occurred prior to the removal of the pheochromocytoma.

DISCUSSION

In most exploratory operations for adrenal tumors of this type, a posterolumbar incision has been used. The bilateral posterolumbar incision described by Young has been employed at times when the location of the tumor was uncertain before operation and when a tumor was not found associated with the adrenal gland first exposed. Other surgeons have preferred to perform the adrenal exploration transperitoneally through an incision in the anterior abdominal wall. Brunschwig, Humphreys and Roome[2] favor the anterior abdominal incision for the following reasons: "(1) Multiple tumors may be present, (2) There may be congenital absence of one adrenal gland, (3) Where, as in some reported instances, the tumor is on the anterior aspect of the kidney and adherent to surrounding tissues, sparing this kidney would be more feasible from an anterior approach than through a lumbar incision." Pneumoretroperitoneography for localization of the tumor is not without hazard and has not been used in many of the successfully treated cases. If localization of the tumor is not possible before operation, bilateral adrenal exploration is more readily performed through an anterior abdominal incision.

The benzodioxane test has been accepted in recent years as a relatively successful diagnostic procedure in cases in which pheochromocytoma is suspected. The efficacy of this drug was demonstrated in this case, not only in diagnosing the original condition, but also as a postoperative test to confirm the successful removal of the entire tumor. This drug has been employed as a diagnostic aid in examination of hypertensive patients at this hospital. No ill effect of the drug was observed in these studies. Drill[3] reported one case of nausea and headache and one in which precordial pain was noted following the use of the drug. The use of histamine injection as a diagnostic procedure is also considered to be hazardous because of the pronounced increase in blood pressure which may occur. Consequently, other drugs, such as tetraethylammonium bromide, are recommended in view of the fact that the blood pressure rise can be more easily controlled by postural changes.[6] The case described in this report again emphasizes the recessibility of many of the effects of a persistent elevated blood pressure, as is demonstrated by the pronounced improvement of the eyegrounds, in kidney function and in electrocardiogram tracings. Similar improvement has been noted by others (Bruce, Brunschwig, Kvale).

SUMMARY

A case of pheochromocytoma in a 37-year-old male who had typical attacks of paroxysmal hypertension, is reported. The diagnosis was confirmed by the use of benzodioxane and histamine tests.

A transverse upper abdominal incision was found to give adequate exposure for bilateral exploration of the adrenal glands and removal of the tumor.

Veterans Administration Center, Wilshire and Sawtelle Boulevards.

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Dermoid Cyst of the Omentum

With Report of a Case

Howard B. Kirtland, Jr., M.D., *San Diego*

In a recent article dealing with omental cysts of clinical importance, Beahrs and Dockerty reviewed the literature on omental tumors and added 14 previously unreported cases of omental cysts. They divided omental tumors into solid and cystic. The cystic outnumbered the solid tumors in a ratio of 4 to 1. The malignant solid liposarcomas and fibrosarcomas were more frequent than the benign lipomas. Cysts of the omentum were subdivided into pseudocysts and true cysts. As examples of pseudocysts they cited cystic lesions following fat necrosis, those forming at the site of trauma with hematoma, those caused by reaction about a foreign body (such as gauze or petrolatum) and, most common, hydatid cysts. The true cysts were usually lined with epithelium or endothelium. Dermoid cysts, of which perhaps a dozen have been reported in the literature, were said to be examples of the epithelium-lined true cysts. Cysts which are probably congenital lymphangiomas but which might be the result of imperfect fusion of the opposed omental surfaces were cited as typical endothelium-lined cysts. Beahrs and Dockerty pointed out that the fewer than 100 cases of omental cysts in the literature probably did not represent the true incidence. The reported age range of patients was 3 months to 76 years, the majority of cysts occurring in the early years of life, 68 per cent among patients less than 30 years of age. Sixty per cent occurred in females. There was no racial predilection. The cysts were asymptomatic or the symptoms were caused by the size of the lesion, rupture of the cyst or torsion of the pedicle.

The following report of a case of dermoid cyst of the omentum is presented because the patient was older than any previously reported, because of the acute symptoms that were present owing to torsion and infarction, and because of the clinical and roentgenologic observations.

A 78-year-old white woman was admitted to the San Diego County General Hospital with a four-day history of shooting pain in the lower abdomen. The pain was intermittent but recurred with increasing frequency and severity. Marked anorexia developed on the day of entry. The

From the Surgical Service, San Diego County General Hospital, San Diego.

Figure 1.—Roentgen appearance of dermoid cyst of the omentum.

patient had not had similar attacks previously. There were no other symptoms referable to the gastrointestinal or genito-urinary tracts. Heart disease of long standing had responded well to treatment.

The temperature was 99.6° F., the pulse rate 100, and respirations 28 per minute. The blood pressure was 200 mm. of mercury systolic and 110 mm. diastolic. The abdomen was protuberant and soft with some voluntary guarding and spasm in the lower two-thirds where there were generalized tenderness and rebound tenderness. Peristalsis was hypoactive. In pelvic and rectal examinations severe pain was elicited by motion of the cervix. In a roentgenogram of the abdomen early ileus and what was interpreted as a large calcified leiomyoma were noted (Figure 1). A clinical diagnosis of infarcted leiomyoma of the uterus was made.

At operation a hard, purplish-red tumor, 10 cm. in diameter, was observed. It contained areas of necrosis and was surrounded by fresh adhesions. The tumor arose from the omentum and lay in the lower abdomen and upper pelvis. The omental pedicle had rotated through three complete turns, and was infarcted. There was no evidence of ovarian attachment. A small amount of free blood was present in the abdomen. Removed and sectioned, the tumor was observed to be a hair-filled dermoid cyst of the omentum with a heavily calcified wall.

The postoperative course was uneventful. The patient was discharged asymptomatic and ambulatory on the sixth postoperative day.

2120 Fourth Avenue.

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Bronchiogenic Cysts

A Report of Two Cases

Elmer C. Rigby, M.D., and Phillip L. Rossman, M.D.,
Los Angeles

AGE extremes for bronchiogenic cysts are well illustrated by the following two case reports, which are considered to be of special interest in that they show some variation in clinical manifestations and anatomical location. Although the lesion is relatively rare, several series of cases have been reported. In 1945, Laipply[2] reported a total of 35 cases collected from the literature. The following year, Blades[1] reported upon an additional 23 cases of bronchiogenic cysts observed in army hospitals, and several small series have been reported since.

These cysts usually arise at or near the tracheal bifurcation. Embryologically, the primitive foregut divides longitudinally, forming the trachea anteriorly and the esophagus posteriorly. Cyst formation is most frequent at the lowest point of division. Histologically, the cyst usually contains elements of the bronchial wall; however, gastric or esophageal derivatives may be present. Cyst formation is thought to be due to the pinching off of a diverticulum at the carinal level or more distally along the main stem bronchi as development proceeds. Due to variations in growth, cysts may be solely mediastinal in position or intimately associated with the fissures or lung parenchyma.

Bronchiogenic cysts are usually detected on routine chest x-rays, for they seldom produce symptoms sufficient to cause the patient to seek medical aid. The principal clinical symptom, if any is present, is dull substernal pain, with or without cough. Wheezing or dysphagia may occur if there is partial obstruction of the trachea or esophagus. Cysts adjacent to the carina are likely to cause these symptoms in infancy or early childhood due to compression of the soft tracheal rings or impingement of the esophagus against the vertebrae. Such severe symptoms are seldom present if the cyst is located farther along a main stem bronchus. With severe bronchial compression, symptoms of atelectasis and pneumonia may ensue. The presence of infection may also indicate the existence of a bronchial communication; the symptoms characteristic of lung abscess or other pulmonary infection would then occur.

In posterior-anterior x-ray films a bronchiogenic cyst appears as a rounded, fairly sharply circumscribed area of increased density near the midline, usually in the vicinity of the hilum. Such lesions are more often on the right side than on the left (Figures 1 and 2). A bronchial communication with the cyst, which is rare, may permit air to enter and, at times, show a fluid level. In the lateral x-ray view the cyst is usually seen in the central mediastinum, either posterior or anterior to the trachea (Figures 1 and 2). If the lesion is large, compression of contiguous structures

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may be observed. Bronchograms may be helpful in showing bronchial distortion or obstruction. If there is an opening into the bronchus, introduction of a contrast medium may delineate the interior of the cyst. Planigrams may sometimes show the bronchial encroachment. Fluoroscopy may show movement of the mass on swallowing, which would suggest a tracheal attachment. If the cyst is anterior and near the pulmonary artery, angiograms may be used to exclude vascular tumor in differential diagnosis. If there is no encroachment of the cyst on a major bronchus, the lesion may not be observed in bronchoscopic examination. Pressure may cause mucosal edema or displacement of the bronchi. Complete bacteriologic and cytologic examination of the sputum discloses no diagnostic information relative to bronchiogenic cysts.

The following two cases of a relatively rare lesion, one in an elderly woman and the other in a young girl, were brought to the authors' attention within a one-week period:

Figure 1.—*Left*—Bronchiogenic cyst present in right hilar area in 75-year-old female. *Right*—Right lateral view of the same patient, showing the cyst anteriorly in the right hilum.

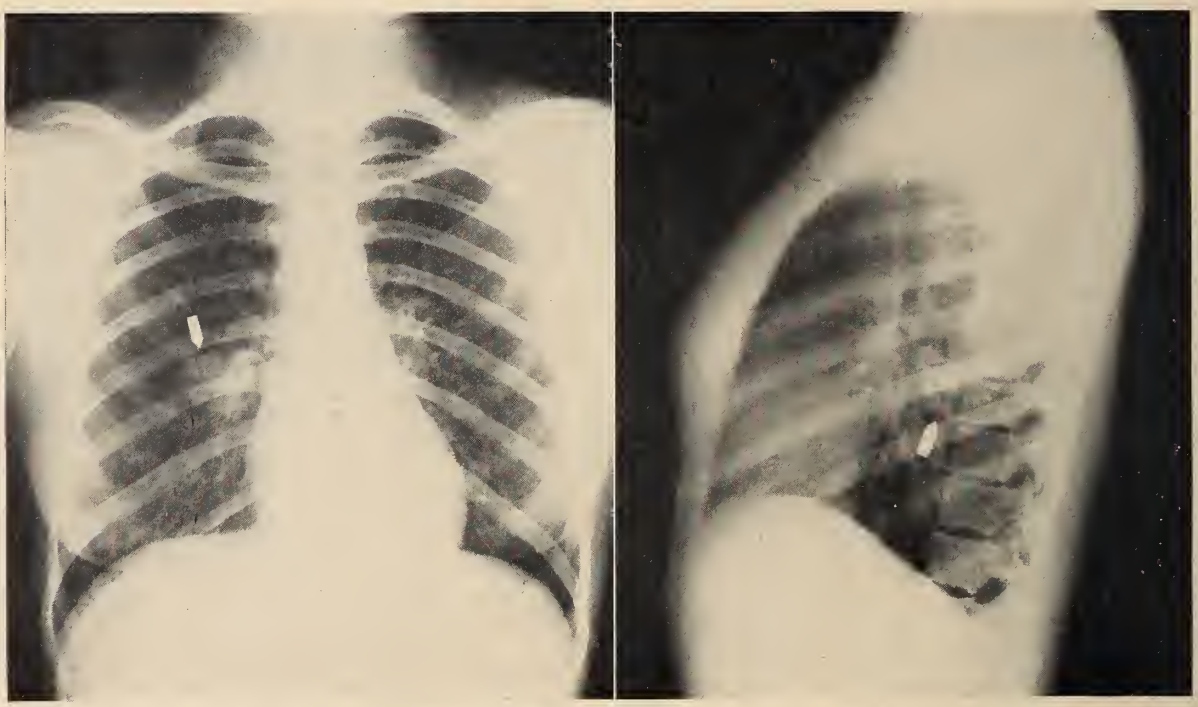

Figure 2.—*Left*—Bronchiogenic cyst present in right hilar area in 20-year-old female. *Right*—Right lateral view of the same patient showing the cyst posteriorly in the right hilum.

Case 1: A 75-year-old white woman felt well until August 10, 1950, when a common cold developed. It gradually subsided except for mild residual cough. No abnormality was noted on physical examination. The blood pressure was 180 mm. of mercury systolic and 90 mm. diastolic. Results of urinalysis were within normal limits, and the blood was normal except for mild normocytic hypochromic anemia. In x-ray films of the chest (Figure 1) a circular mass was noted in the right anterior hilar area at the root of the right lung. Full excursion of the tumor mass on inhalation and exhalation was observed fluoroscopically. In bronchoscopic examination the right main stem bronchus was observed to contain a small amount of mucus. At the level of the superior segmental branch and the middle lobe orifice there was slight edema and pallor. In biopsy of a specimen taken from this site, mild inflammatory reaction was noted. Exploratory thoracotomy on the right side was carried out two months after the onset of symptoms. The tumor was cystic, ovoid in shape and 3 x 4 cm. in size. Inferiorly, it was adherent to the pulmonary artery and at the hilar end was adherent to the right main stem bronchus. It contained a viscid, brownish-black fluid with a slightly greenish cast. After evacuation, the cyst lining was white, smooth and glistening, and two small spicules of cartilage were noted within the sac wall. The cyst was freed from the upper and middle lobes down to the hilum. It was fused to the pulmonary artery and the intermediate bronchus. Most of the sac was excised and the margins were closed to obviate the formation of a bronchopleural fistula. Recovery was uneventful.

Pathologic Report: The interior of the cyst was in part lined by flattened bronchial epithelium. Smooth muscle was scattered throughout and in one area a portion of cartilage was encountered. Beneath the lining epithelium, old hemorrhage was indicated by an accumulation of hemosiderin pigment bearing macrophages. There was no evidence of malignancy in the sections examined.

* * *

Case 2: A 20-year-old girl, entirely asymptomatic, had an x-ray film of the chest taken in a survey program in August 1950. Family and past history were irrelevant. Physical examination was normal. In x-ray films (Figure 2) a density in the right posterior hilar area was noted. Results of laboratory studies were normal. In bronchoscopic examination the tracheobronchial tree was observed to be normal, with a small amount of gray mucus in the right main stem bronchus. Microscopic examination of the bronchial aspirations showed normal bronchial epithelium; no malignant cells were observed.

The right chest was explored in October 1950. Deep in the long fissure between the lower and upper lobes, a soft cystic ovoid mass, measuring 3 x 4 cm. in diameter, was freed on all sides from the vessels and lung tissue. The capsule was yellowish-white in color and the thin, syrupy contents were a translucent white. The base of the cyst was adherent to the superior segmental bronchus. In removal of the cyst, the bronchus had to be divided, so resection of the superior lobar segment of the right lower lobe was carried out. Recovery was uncomplicated.

Pathologic Report: The cyst wall varied in thickness from 1 to 2 cm. and contained a thin, gelatinous, turbid fluid. The lining epithelium was stratified columnar and several small scattered glands were present beneath it. Cartilage and smooth muscle were present. There was no evidence of malignancy.

DISCUSSION

The coincidental occurrence of these two cases permitted detailed comparisons. In the 75-year-old patient, the cyst was located in the anterior right hilum with the attachment proximal to the middle lobe bronchus. The cyst lay in the short fissure between the upper and middle lobes, anteriorly (Figure 1). The younger patient also had a cyst in the right hilar area, but it lay in a posterior position and was attached to the superior segmental bronchus of the right lower lobe (Figure 2). The cysts in these two cases were almost exactly the same size, and both were ovoid. In the case of the younger patient the cyst was completely asymptomatic. In the elderly woman, symptoms were of two months' duration, so the conjecture of hemorrhage initiating symptoms must be considered. In this case the cyst contained fragments of cartilage perforating the inner lining of the thin wall, as well as a dark brown oily liquid identical in appearance to the contents of pelvic chocolate cysts in endometriosis. In the case of the young woman the cyst contained a white somewhat translucent mucilaginous material. Sections of the wall of the cyst in both cases showed the usual structures found in a bronchial wall. The lining surface of ciliated columnar epithelium was smooth and in one instance a tendency to trabeculation was present in the distal portion. Mucus glands, cartilage, elastic tissue and smooth muscle were present in each. Cartilage was in minimal amounts with no tendency to ring formation.

In the absence of infection, as was true of these two cases, symptoms were dependent upon the size and location of the mass. In the young patient, no degree of questioning gave the least suggestion of any symptoms prior to incidental discovery of the lesion on a routine chest x-ray. In the elderly patient there were no symptoms prior to the onset, two months earlier, of cough and associated chills and fever. One might surmise that the beginning chill and cough followed the hemorrhage into the cyst which caused very rapid swelling and compression of adjacent lung tissue. The bronchoscopic observation of edema of the mucosa adjacent to the middle lobe orifice suggests this sudden encroachment.

DIAGNOSIS AND TREATMENT

An absolute diagnosis is seldom made without operation or autopsy. Certain roentgenologic and clinical features suggest a probable diagnosis prior to operation. In both of the cases reported here, the diagnosis of bronchiogenic cyst was considered most likely preoperatively, chiefly on the basis of x-ray evidence. The cysts usually lie somewhat posterior but adjacent to the hilar areas and not in the paravertebral area where tumors of nerve origin are most common. Substernal tumors or anterior mediastinal masses are usually thymic, thyroid or teratodermoid in type. Differentiation from a malignant neoplasm can seldom be made clinically. In the treatment of these lesions, exploration should be carried out and the cyst removed in entirety if possible. Carcinomatous change has been known to take place in the epithelial lining of bronchiogenic cysts, although this is unusual. With present-day techniques, plus chemotherapy, it is relatively safe to open the chest, inspect the lesion or remove any tumor mass. In the two cases reported a posterior lateral approach was used.

SUMMARY

Two cases of bronchiogenic cyst, one in a girl 20 years of age, the other in a woman aged 75, are reported. The problems in diagnosis are presented and the necessity of performing an exploratory thoracotomy to rule out a malignant tumor is emphasized.

1441 Westwood Boulevard.

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Circumcaval Ureter

JOHN A. DOUGHERTY, M.D., *Oakland*

SINCE Hochstetter's[7] report in 1893 on the dissection of an infant, reports of cases of circumcaval ureter have been frequent enough to remove this lesion from the list of exceedingly rare anomalies.

Duff,[4] in a review of the literature in connection with a case reported by him in 1950, gathered reports of 39 cases. In 22 instances the abnormality was noted in the anatomical laboratory or at necropsy, in 13 it was observed at operation, and in four instances was diagnosed preoperatively. Surgical repair was carried out in nine cases, with good results in seven. De Carlo[3] observed circumcaval ureter in one of 4,185 cadavers dissected at the Daniel Baugh Institute of Anatomy.

For practical purposes circumcaval ureter may be regarded as a right-sided anomaly. (The only case of bilateral retrocaval ureter in the literature was reported in 1905 by Gladstone[5] who, in dissecting the body of an infant, observed postrenal vena cava on both sides.) The lesion occurs as the result of the persistence beyond fetal life of the posterior cardinal vein, which is the primitive vein for the posterior part of the body. Ordinarily the inferior vena cava is formed by the union of that part of the vena cava which is cephalad to the kidney and the iliac veins at their junction, and the cardinal vein then atrophies. When this atrophy does not take place the cardinal vein becomes the main channel of the inferior vena cava and the ureter must of necessity pass behind it. Thus, it is a vascular and not ureteral anomaly.

The embryological aspects of circumcaval ureter have been gone into exhaustively by McClure and Butler,[9] Gruenwald and Surks,[6] Randall and Campbell,[12] Pick and Anson[11] and Wilson and Herzlich.[13]

When conditions permit, the treatment, as reported by Kimbrough[8] in 1934, is to divide the ureter, bring the distal end over the vessels and anastomose the severed ends. In most cases the ureteral obstruction has caused such a degree of renal damage that nephrectomy is imperative.

Recently, Beard and Goodyear[1] suggested two procedures which should be of assistance in making a precise diagnosis. In one of two cases reported by them a venacavogram was made after the method of O'Loughlin.[10] (Twenty cubic centimeters of a 35 per cent solution of Diodrast® is injected into the femoral vein. This outlines the iliac vein and the inferior vena cava. If a denser shadow is desired, 70 cc. can be injected without harm.) In the other case a No. 8 catheter was passed into the antecubital fossa to the heart and down the vena cava. With the vena cava thus outlined and radiopaque catheter in the ureter in question, stereoscopic films were taken, making the relations of the ureter and vena cava plain.

Randall and Campbell suggested that in a lateral view with a ureteral catheter in place, if the ureter is postcaval the catheter will appear to impinge on the vertebral column while the normally situated ureter will fall away. (In oblique views in the case herein reported, this impingement was observed.) Creevy[2] expressed the opinion that failure to identify the lesion by pyelography must be due to unfamiliarity with the condition, since the course of the ureter is so typical that once seen it is not easily forgotten. The author is in complete accord with this statement. In illustrations printed with several reported cases the films so closely resemble one another that a casual observer might take them all for pyelograms in a single case.

REPORT OF A CASE

The patient, a white woman 35 years of age, stated that in November 1947 she ran a nail into the left great toe and the toe became infected. Chills, fever and a pain in the right side of the back followed. In an intravenous pyelogram an obstruction on the right side with no evidence of calculus was observed. There was considerable distention of the pelvis of the kidney with some blunting and irregularity of the calices. A week later cystoscopy and retrograde pyelography were done. The ureteral orifices were normal in location and

Figure 1.—Preoperative film showing course of ureter.

Figure 2.—Preoperative film showing hydronephrosis.

appearance. No. 5 catheters were passed to both renal pelves without meeting obstruction. Urine dropped continuously from the right ureter and intermittently from the left. Indigo carmine injected intravenously appeared in good concentration and in normal time on the left, and in fair concentration and in normal time on the right.

Figure 3.—Film two years postoperatively.

Figure 4.—Twenty-six months postoperatively, showing further shrinkage of pelvis.

Plain films, and pyelograms, supine, erect and right oblique, were taken. There was evidence of a considerable degree of hydronephrosis on the right. The upper ureter was quite redundant, forming a long curve. It extended first downward from the ureteropelvic junction, then upward and mesially for about three inches. The portion described was quite wide and the hydronephrosis was apparently caused by a kink at the level of the third lumbar vertebra.

The patient entered Providence Hospital on March 4, 1947, with a diagnosis of hydronephrosis, hydroureter and circumcaval ureter on the right side.

A right loin incision was made. The upper two-thirds of the right ureter and the lower pole of the right kidney were exposed. The ureter was observed to course under the inferior vena cava and to reappear below the division of the right common iliac. To clear the field, the right ovarian vein was ligated. The ureter was then sufficiently freed above and below so that traction on the ureter did not affect the vessels. The ureter was then divided at right angles to its long axis above the vena cava and the distal portion was pulled from under the vessel and then brought over the iliac vessels and vena cava. About 2 cm. of the redundant ureter was excised and the ureter was then anastomosed with number 4-0 chromic, interrupted sutures on an atraumatic needle. A No. 10 T tube was used both as a splint for the anastomosis and as a drain for the pelvis. It was introduced into the ureter 2 cm. above the site of the anastomosis. The kidney, which was not mobile, was not disturbed in its bed.

Three days postoperatively the patient became afebrile. She was discharged on the 12th day. The T tube was removed on the 25th day. At that time there was no return of indigo carmine from the right kidney. One month later there was still no dye from the right side but the orifice was observed to contract and dilate in a normal manner. The second month after the T tube was removed the dye appeared in good concentration 25 minutes after it was injected. After that the function of the right kidney, as measured by the intravenous injection of indigo carmine, was normal, the dye appearing in 5 to 7 minutes in good concentration. The right ureter was dilated nine times the first postoperative year and then let alone.

At two years and at 26 months postoperatively pyelograms were taken. The hydronephrosis was observed to be largely relieved. In a film taken ten minutes after the pelvis was filled and the catheter withdrawn it was noted that in the erect position the pelvis emptied normally. The urine was never grossly contaminated. Penicillin and sulfadiazine given for several days before the operation had rendered the urine free from pus and organisms and it remained so afterward. After the operation the patient worked and lived in a normal manner.

COMMENT

The success or failure of plastic operations on the kidney pelvis and ureters appears to depend to a large extent on the degree of infection, and, to a scarcely less extent, on the patient's intelligent cooperation. An important feature in the case presented was that the diagnosis was made preoperatively, which permitted the planning of the operation. The plastic T tube, used both as a splint to the ureter and a drain for the pelvis, apparently fulfilled these two duties satisfactorily.

SUMMARY

A circumcaval ureter was diagnosed preoperatively on the basis of roentgen evidence.

The preoperative diagnosis permitted careful planning of the surgical procedure. Anastomosis was done, using a T

tube both as a splint for the anastomosis and as a drain for the renal pelvis. Improvement in the kidney was observed pyelographically two years after operation.

3115 Webster Street.

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California MEDICINE

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Editor, DWIGHT L. WILBUR, M.D. *Assistant to the Editor*, ROBERT F. EDWARDS

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EDITORIALS

A New Study of C.P.S.

California Physicians' Service will be given another look-over in the coming year as a result of action taken by the C.P.S. House of Delegates at the annual meeting. The House adopted a resolution calling upon the Council of the California Medical Association to appoint a committee "to ascertain the expectations of the medical profession of California in regard to C.P.S."

The functions of this committee are given in the resolution as follows: ". . . to make a careful study of C.P.S. as related to the operations of private insurance companies and other prepaid medical care groups, and to determine the future role and purpose of California Physicians' Service in the whole field of voluntary prepaid medicine."

While the language of the resolution is permissive in "urgently requesting" the C.M.A. Council to appoint such a committee, the Council has acted in the spirit of the proposal and has taken steps to appoint a committee which will be representative of all sections of the state and of all interests of physicians in various types of practice.

Appointment of this committee, which is expected to start functioning immediately, is reminiscent of the "Chandler Committee" of 1945-46. That group resulted from a similar demand from the House of Delegates for a scrutiny of medicine's own prepayment plan; its purpose was somewhat different from that of the present committee, in that it aimed primarily at going into the business affairs of C.P.S., particularly as those affairs affected the relationship between the organization and its physician members. At the same time, many of the considerations of the earlier committee will doubtless be given further study by the present body.

If the findings, recommendations and results of the "Chandler Committee" study may be taken as a criterion, the review of C.P.S. by the present committee should have a salutary effect. The former committee made a series of recommendations which were put into effect by C.P.S. and the C.M.A., including: Recognition of a system of both service and indemnification, with an income ceiling as the dividing line; biennial revision of the C.P.S. fee schedule; recognition of the need for periodic revision of the income ceiling; recognition of the need for C.P.S. to make its own hospitalization arrangements; approval of surveys of the business methods of C.P.S.; recognition of the respective spheres of authority of the C.M.A., the C.P.S. Board of Trustees and the management executives of C.P.S.; appointment of competent businessmen to the Board of Trustees of C.P.S. and, finally, continued sponsorship of C.P.S. and the voluntary systems of prepaid medical care by the California Medical Association.

There were additional recommendations of a more technical nature but the results of the foregoing may all be seen in the current operations of C.P.S.

The current committee will be looking into the entire picture of C.P.S. from a little different angle but still from the point of view of the practicing physician. Voluntary health insurance has grown so rapidly, and competition today is so keen among the numerous underwriters, that an attitude of let's-stop-and-take-stock is dictated by sound judgment. An appraisal of the place of C.P.S. in the sun of voluntary health insurance cannot but be helpful to the medical profession. An unbiased study of its "future role and purpose" will undoubtedly result in a clear picture of just where medicine's baby is going and should go. At the same time, the committee will have a chance to take a closer look at other

forms of voluntary prepaid medical care and to assess them at their true value and their comparative status with C.P.S.

The functioning of this committee in the coming year will mark another step forward in the search for truth in the important field of voluntary prepaid medical care. The American public, and especially the California public, has made its wishes crystal-clear in demanding that *some* system of health insurance be available. If the medical profession is to maintain its leadership in properly appraising and meeting the public interest, an objective review of the current situation is bound to be helpful.

The new committee has a big job cut out for it. In prospect, it looks as though the committee can and will handle its work in capable fashion and will come up next year with ideas which will be beneficial to all concerned, including physicians.

A.M.A. 1951 Meeting

Atlantic City, with its huge exhibit hall and rows of large boardwalk hotels, last month played host to the 100th Annual Meeting of the American Medical Association, a meeting which was marked for its quiet and calm. In earlier years some A.M.A. sessions have covered some bitterly controversial subjects in the policy-making House of Delegates. In contrast, the 1951 meeting accomplished its business with a minimum of argument and a maximum of speed.

With the close of the session, it appeared that California had carried off at least its share of the honors. Dr. John W. Cline was installed as president of the A.M.A., Dr. Dwight H. Murray was elected Chairman of the Board of Trustees and Mrs. Ralph B. Eusden was elected President-Elect of the national Woman's Auxiliary. On top of that, three Californians were named by their specialty sections as members of the House of Delegates, increasing the California strength in the House to 14 out of 201 members.

Immediately preceding the A.M.A. meeting, the annual session of the American College of Radiology bestowed upon Dr. Lowell S. Goin, a former C.M.A. president, its coveted Gold Medal for outstanding achievement in the field of radiology. Doctor Goin is the first recipient of this award since 1941 and the seventh in the history of the College. As such he follows in the footsteps of Mme. Curie and other renowned figures in the development of radiology.

Tackling the question of the dual system of membership and fellowship in the A.M.A., the House of Delegates voted to put over final consideration until the interim session next December. This confusing situation should be straightened out at the earliest possible moment; in the light of existing policies of the A.M.A. in collecting annual dues from its members, the classification of fellowships seems to be an unneeded appendage which could easily and profitably be excised. The business offices of every medical society would favor such a move, as well as the individual members who are caught up in the tangle of duplication of effort without tangible benefit.

The House of Delegates took positive action on the question of hospital accreditation, by approving the action of the Board of Trustees of agreeing to participate in a program in which the official accrediting body would be composed of representatives of the A.M.A., the American College of Surgeons, the American College of Physicians and the American Hospital Association. Hospital inspection under this program would be rotated among the representatives of the several groups.

Next December's meeting of the A.M.A., the clinical session, will be held in Los Angeles, which then for the first time will have a chance to play host to the national body. The 1954 Annual Session will be held in San Francisco, a decision which was unanimously voted.

It may be true, as some wag stated, that in ten years nobody will even know that the A.M.A. held a meeting in 1951; on the other hand, the scientific advances of the meeting bear tribute to medicine's ever-progressive attitude, even though the business side of the meeting may have been without great incident.

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NOTICES AND REPORTS

The C.M.A. President-Elect

Lewis A. Alesen, M.D., comes to the high office of President-Elect of the California Medical Association with an unusual apprenticeship and training in medical executive positions.

Dr. Alesen was born in West Pullman, Illinois, December 4, 1896. At the University of Illinois he received his Bachelor of Science degree in 1919 and a doctorate in medicine in 1921. He took his hospital training at the Los Angeles County Hospital. Dr. Alesen began the private practice of medicine in 1923. He is a diplomate of the American Board of Surgery and a fellow of the American College of Surgeons and of the International College of Surgeons. For many years he has been Associate Professor of Surgery at the College of Medical Evangelists.

Early in his medical career Dr. Alesen became interested in organizational work. One of the founders of the old Fellowship Club (later to become the Junior Section), he represented this group in the Council of the Los Angeles County Medical Association in 1934. He was a Councilor in that body until 1940. In that year Dr. Alesen became secretary-treasurer of the Los Angeles County Medical Association, served in that position for three years, and was elected president in 1944. He is a member and a past president (1949) of the Los Angeles Surgical Society. He has been chairman of the Department of Surgery at the Los Angeles County Hospital since 1949.

In 1945 Dr. Alesen was elected Vice-Speaker of the House of Delegates of the California Medical Association, a position in which he served for two years under the able guidance of Dr. E. Vincent Askey. Advanced to the position of Speaker in 1947, he served with distinction in that capacity until his elevation to the office of President-Elect this year. Dr. Alesen is also a delegate to the House of Delegates of the American Medical Association.

Dr. Alesen has always stood resolutely for the dignity of the private practice of medicine. While he is proud to be classed as a "rugged individualist," he is far from being a reactionary. He is firm in his conviction that the profession of medicine can and will resolve the problems which confront it in the complexities of present-day society. He has no delusions that this goal may be reached by wishful thinking and he brings to his new task a fighting spirit, a clear-thinking mind and a devotion to the ideals which have made American medicine and the American nation the greatest in the world.

LEWIS A. ALESEN, M.D.

Dr. Murray Heads A.M.A. Board of Trustees

California was signally honored by the American Medical Association this year when, at the close of the A.M.A. annual session, Dr. Dwight H. Murray of Napa was unanimously elected Chairman of the A.M.A. Board of Trustees.

Doctor Murray has long been known to the medical profession in California as an untiring leader, especially in the field of medical legislation. In more recent years he has attained the same position in the national legislative field and for several years past has served as chairman of the legislative committee of the A.M.A. Board of Trustees.

Born in Indiana in 1888, Doctor Murray was graduated at the University of Indiana School of Medicine in 1917. Almost immediately he went into active service with U. S. Navy, serving in the Atlantic under Admiral "Bull" Halsey and other commanders whose names have since become famous. Upon his release from the Navy in 1921, he established a general practice in Napa and has remained there to this time.

Dwight Murray, "Murph" to his friends, displayed an interest in legislative activities in California a number of years ago and in 1940 was appointed chairman of the C.M.A. Committee on Public Policy and Legislation, a post he has filled most capably from that time on. In late 1944 he was the guiding force behind establishment of the United States Health League, a coalition of western states medical associations which opened medicine's first legislative representative office in Washington, D.C. He has served as chairman of that group from its inception.

Recognition of Doctor Murray's extensive legislative knowledge came in 1945, when he was elected a member of the A.M.A. Board of Trustees, succeeding the late Edward M. Pallette of Los Angeles. His work on the top A.M.A. board was described by a national magazine some time later in a series of thumbnail personality sketches of the board members; the magazine said in effect that "Doctor Murray sits back quietly, waits until all the arguments are in and then busts loose and gives 'em hell."

As California's legislative chairman for the past 11 years and as A.M.A. legislative chairman for the past three years, "Murph" has repeatedly proved his great capabilities beyond shadow of doubt. It is certain that in his new capacity as board chairman he will rise to new heights as a leader in the American Medical Association and as an effective spokesman for the medical profession.

Doctor Murray resides in Napa, is married and the father of two children. His daughter Jean is married to Robert Huber, a young San Francisco attorney, and is the mother of two children. His son, "Mike," is a freshman medical student at University of California School of Medicine.

Only one question remains unanswered about Dwight Murray. How can he do as much as he does and still carry on an extensive general practice? The answer doubtless lies in his great capacity for friendship and for getting things done with a minimum of difficulty. The best portrait of Dr. Murray is the esteem in which his patients, as well as his colleagues, hold him.

DWIGHT H. MURRAY, M.D.

Council Meeting Minutes

Tentative Draft: Minutes of the 379th, 380th, 381st, 382nd and 383rd Meetings of the Council of the California Medical Association.

379th Meeting

The meeting was called to order by Chairman Shipman in Conference Room 8 of the Biltmore Hotel, Los Angeles, at 9:30 a.m., Saturday, May 12, 1951.

Roll Call:

Present were President Cass, President-Elect MacLean, Speaker Alesen, Vice-Speaker Charnock, Councilors Shipman, Lum, Ball, Crane, Henderson, Dau, Ray, Montgomery, Pollock, Green, West, Heron, Thompson and Bailey, Secretary Daniels and Editor Wilbur. Absent for cause: Councilor Frees.

Present by invitation were Executive Secretary Hunton, Legal Counsel Hassard, Field Secretary

Clancy, Public Health League of California Executive Secretary Read, Dr. Robertson Ward of California Physicians' Service, Legislative Chairman Dr. Dwight Murray, county society executive secretaries Waterson of Alameda-Contra Costa, Wood of San Mateo, Donovan of Santa Clara, Gillette of Fresno, Venables of Kern, Cochems of Los Angeles and Tobitt of Orange, Public Relations Counsel Clem Whitaker, Jr., Ned Burman and James Dorais.

Present by invitation during parts of the meeting were Dr. John W. Cline, president-elect of the American Medical Association, Orris R. Myers of Humboldt County and Joseph Josephson of Santa Clara County.

1. *Minutes for Approval:*

On motion duly made and seconded, minutes of the 378th Council meeting, held March 17, 1951, in San Francisco, were approved.

2. *Membership:*

(a) A report of membership as of May 5, 1951, was received and ordered filed.

(b) On motion duly made and seconded, 2,171 members whose dues had been received since April 1, 1951, were voted reinstatement as active members.

(c) On motion duly made and seconded in each instance, 26 applicants were elected to Associate Membership. These were:

Henrik L. Blum, Eva Haumeder, Carl C. Epstein, Lowell E. Kidder, William James Perry and William W. Stiles, Alameda-Contra Costa County; J. C. Drake and Ira J. Seitz, Fresno County; Alvin R. Leonard, San Diego County; Louis Brizzolara, Ellen Brown, Herbert Dryfoos, Z. L. Henry, R. S. Sherman, Jr., and Pearl M. Smith, San Francisco County; Doris Abrams, A. V. Giampaoli, Gordon Helsley, William Jepson, Louise Smith King and John Lane Pasmore, Santa Clara County; Marshall Porter, Sonoma County; Michael T. Koenig, Wm. E. McCullough, Walter P. Streitel and Adolf Wallner, Ventura County.

(d) On motion duly made and seconded in each instance, five applicants were elected to Life Membership. These were:

J. O. Chiapella, Butte-Glenn County; Joseph R. Allen and James M. Stoddard, Los Angeles County; George H. Cruikshank, San Diego County; Harry R. Oliver, San Francisco County.

(e) On motion duly made and seconded in each instance, ten applicants were elected to Retired Membership. These were:

Richard G. Watson, Alameda - Contra Costa; Edwin R. Scarboro, Fresno County; Montrose M. Bernstein and C. F. Schmid, Los Angeles County; E. V. Knapp, Marin County; Burnett W. Wright, San Diego County; Samuel Hanson, San Joaquin County; W. H. Heuschele, Santa Clara County; Reo B. Armitstead and Arthur H. Stoll, Ventura County.

(f) On motion duly made and seconded in each instance, 21 applicants were granted reductions of dues because of postgraduate study or protracted illness.

3. *Financial:*

(a) A report of bank balances as of May 5, 1951, was received and ordered filed.

(b) A report of revenues and expenditures for April and for the ten months ended April 30, 1951, was received and ordered filed.

(c) Dr. Donald D. Lum, chairman of the Auditing Committee, presented a proposed budget for the fiscal year starting July 1, 1951. Several items came under discussion and adjustments from the proposed budget were agreed upon. On the basis of the proposed budget, the Council voted to recommend that dues for the calendar year 1952 be $40 per active member and that this figure and this budget be presented to the Finance Committee of the House of Delegates with the Council's recommendation for adoption.

4. *Committee on Industrial Accident Commission:*

Dr. Frank J. Cox, chairman of the Committee on Industrial Accident Commission, reported on a preliminary study made by an economist employed by the committee to investigate the level of industrial medical and surgical fees in their relationship to other economic factors. This study has shown that medical fees have lagged far behind other economic index factors over a period of years and that adjustments are indicated. He also reported on meetings held with representatives of compensation insurance carriers and with members of an interim committee of the State Legislature. Dr. Cox suggested that further studies be carried on under an appropriation of $15,000 previously granted his committee by the Council.

There was considerable discussion of the ends to be gained through such studies, with approval of the committee's suggestions given by the Council. A motion was made and seconded to appoint a committee to study the over-all question of medical and surgical fees, both private and industrial, but on vote the motion was lost.

5. *Report of the Council:*

(a) It was regularly moved, seconded and voted to add to the Report of the Council to the House of Delegates a section calling for support of the Student American Medical Association and urging the county societies to lend their support in this direction. The motion included the provision for subscriptions to the official Journal to be offered to Student A.M.A. members at a net cost to them of $1 per year, the remaining $2 per year required by postal regulations to be supplied out of general funds to be credited to the Journal.

(b) It was regularly moved, seconded and voted to add a section to the Report of the Council, calling for establishment within the Council of a Committee on Finance, through which all proposed appropriations in excess of the annual budget must pass and be approved before the Council acted on such proposals: this section would be offered only in the

event the proposed Constitution and By-Laws, which contain alternate provisions to give comparable protection, were not adopted.

6. *Committee on Committees:*

It was regularly moved, seconded and voted that the chairman appoint a committee to make recommendations for appointments to the Standing Committees. The chairman appointed John W. Green chairman and Ivan C. Heron, Jay C. Crane and C. V. Thompson as members.

7. *House of Delegates:*

(a) Dr. Lewis A. Alesen, Speaker of the House of Delegates, recommended that the hour of 3 p.m. on Tuesday, May 15, be designated as the meeting hour for the Administrative Members of California Physicians' Service, and it was regularly moved, seconded and voted that the order of business of the House of Delegates be set accordingly.

(b) It was regularly moved, seconded and voted that the chairman be authorized to invite Dr. John W. Cline, President-Elect of the American Medical Association, to address the House of Delegates and request the permission of the House of Delegates for this appearance.

8. *Committee on Medical Economics:*

(a) Dr. H. Gordon MacLean, chairman of the Committee on Medical Economics, reported on a study made by that committee of points of friction between physicians and underwriters of voluntary health insurance programs. The report showed that, aside from some minor complaints, practically all items in this category revolved around allegations of overcharges by physicians. The report made a comparison of indemnity allowances and actual charges by surgeons in a long list of actual cases and pointed out that while there was a variation in indemnities and fees in about 50 per cent of the cases studied, the variations were mainly of a nominal nature and that in not more than about 5 per cent of the total cases was there any indication of actual overcharging. The report made several recommendations for eliminating or reducing this type of complaint.

(b) Dr. MacLean reported on the projection of the report rendered by Ernst Dichter, Ph.D., in a study made for the Committee on Medical Economics on the question of individual physician-patient relationships. He recommended that members of the Council study this report thoroughly and that copies of it be sent later to all members of the Association.

9. *Emergency Maternal and Infant Care:*

Dr. Ray reported on a meeting held May 1, 1951, with the State Department of Public Health and representatives of the Children's Bureau on the question of reestablishment of the Emergency Maternal and Infant Care program of World War II. Two bills are now pending before Congress, one which would reestablish the former program and one which would grant a cash allowance for maternity care to the wives of enlisted men in specified grades. Dr. Ray discussed the possibility of suggesting that this program be handled through C.P.S. and similar Blue Shield plans.

On motion duly made and seconded, it was voted to support the American Medical Association in its opposition to one of the bills now before Congress (see also Item 7, 380th meeting).

10. *Public Policy and Legislation:*

Dr. Dwight H. Murray, legislative chairman, and Mr. Ben H. Read, executive secretary of the Public Health League of California, discussed numerous bills now pending before the State Legislature. To date a total of 5,246 bills has been introduced in the Legislature, about 10 per cent of which directly affect the practice of medicine or the public health. Many of the more important bills were discussed.

Discussion was held on the proposal to license practical or vocational nurses and, if so licensed, under which board would such licensing take place. Possible boards would be the Board of Medical Examiners, the Board of Nurse Examiners and the State Department of Public Health. It was agreed to discuss the matter further with the State Director of Public Health.

11. *Hospital Staff Appointment:*

Dr. Neil Dau brought before the Council the situation obtaining in his Councilor District, where a physician has not been appointed to a hospital staff and seeks aid from the Council in investigating the reason for such non-appointment. It was regularly moved, seconded and voted that this constituted a local matter in which the Council of the Association could not intervene.

12. *National Council of Churches of Christ:*

Dr. Dau discussed the appeal of the Council of Churches of Christ of America for a donation of $5,000 toward the cost of a mobile medical unit to serve migratory farm workers in the San Joaquin Valley. It was agreed to table this request temporarily, subject to its consideration at a later meeting during the 1951 Annual Session.

13. *Meeting Place for 1952:*

It was regularly moved, seconded and voted to hold the 1952 Annual Session at the Hotel Biltmore, Los Angeles.

Adjournment:

There being no further business to come before the meeting, it was adjourned at 4:00 p.m.

* * *

380th Meeting

The meeting was called to order by Chairman Shipman in Conference Room 6 of the Biltmore Hotel, Los Angeles, at 7:30 a.m., Sunday, May 13, 1951.

Roll Call:

Present were President Cass, President-Elect MacLean, Speaker Alesen, Vice-Speaker Charnock, Councilors Shipman, Lum, Ball, Crane, Henderson,

Dau, Ray, Montgomery, Pollock, Green, West, Heron, Thompson and Bailey. Secretary Daniels and Editor Wilbur. Absent for cause: Councilor Frees.

Present by invitation were Executive Secretary Hunton, Legal Counsel Hassard, Field Secretary Clancy, Legislative Chairman Dr. Dwight H. Murray, county society executive secretaries Waterson of Alameda-Contra Costa and Gillette of Fresno, Public Relations Counsel Clem Whitaker, Jr., Ned Burman and James Dorais.

Present by invitation during parts of the meeting were Dr. Lyell C. Kinney, chairman of the C.M.A. Cancer Commission and Mr. William T. Bender.

1. *Student American Medical Association:*

Mr. William T. Bender, a senior medical student at University of California, addressed the Council on the formation of school units of the Student American Medical Association. He reported on a meeting of the Student A.M.A. held in Chicago in December, at which 48 medical schools were represented by selected students. In February a meeting of the student council of the organization was held with three representatives of the A.M.A. He reported that 40 medical schools have now formed local units; in California, one unit has been formed at University of California, one is under formation at College of Medical Evangelists, the University of Southern California hopes to have a unit formed by next December, and Stanford has taken no steps to date toward such formation.

Mr. Bender outlined some of the aims of the Student A.M.A., requested that CALIFORNIA MEDICINE be made available to members of the student body at an annual rate of $1 per year, and that the Association throw its support behind the movement. After considerable discussion and a series of questions and answers, it was agreed to request Mr. Bender to address the House of Delegates in order to bring this information before the entire body.

2. *Cancer Commission:*

Dr. Lyell C. Kinney, chairman of the Cancer Commission, appeared to outline the program of the commission for the coming year. The program includes the employment of a medical director, one-half of whose salary is paid by the American Cancer Society, the distribution of a pamphlet to all general practitioners, one-half of which expense will be borne by A.C.S., a series of cancer conferences and other items which would total a cost of $19,000 for the Caneer Commission. It was regularly moved, seconded and voted that this sum be approved for inclusion in the budget for 1951-1952.

3. *Introduction of Dr. Charles Gordon Heyd:*

At this point, President Cass presented to the Council Dr. Charles Gordon Heyd of New York, the President's guest speaker, a former president of the American Medical Association and eurrently president of United Medieal Service of New York, the Blue Shield Plan in the metropolitan New York area. Dr. Heyd expressed his pleasure in attending the Annual Session.

4. *Committee on Use of Radio:*

Dr. Dwight L. Wilbur, chairman of a committee to investigate the possible use of radio as a public relations medium, reported that the committee had considered the possibilities of two types of radio programs, one based on entertainment as a means of attracting an audience and one based on the use of a medical commentator. The latter type of program would entail the use of a professional radio performer as a commentator and would cost an estimated $125,000 annually. Mr. Clem Whitaker, Jr., supplemented Dr. Wilbur's report, which was given without recommendation, and outlined the costs involved in a commentator type of program, including a professional commentator at about $900 per broadcast, a research writer at about $750 monthly, the use of statewide radio networks at $668 to $856 per week and other costs bringing the total to an estimated $120,000 to $130,000 per year. On motion duly made and seconded, it was voted to table this proposal.

5. *Student American Medical Association:*

On motion duly made and seconded, it was voted to reiterate the approval made in the previous meeting, to make available to members of the Student A.M.A. subscriptions to the official journal at a rate of $1 per year, the budget to be adjusted to show $2 per subscription to be credited to the journal out of general funds, and this recommendation to include the discontinuance of the present publication, *Future M.D.*

6. *Governor's Conference on the Aging:*

Dr. Albert C. Daniels reported on his attendance at the Governor's Conference on the Aging, showing how the problems discussed at this meeting might well be translated into legislative proposals on a state or federal basis.

7. *Public Policy and Legislation:*

Dr. Dwight H. Murray, legislative chairman, asked the Council to go on record in opposition to a bill now before Congress to provide federal aid to medical schools and another bill, S. 1245, which would establish an Emergency Maternal and Infant Care program. On motion duly made and seconded, it was voted that an addendum to the Report of the Council be prepared to express support of the care of hardship cases in maternity care for wives of enlisted military personnel, on a basis which would not interfere with the practice of medieine or hospitalization and which would favor the use of existing voluntary organizations.

Adjournment:

There being no further business to come before the meeting, it was adjourned at 9:20 a.m.

381st Meeting

The meeting was called to order by Chairman Shipman in Conference Room 6 of the Biltmore Hotel, Los Angeles, at 7:30 a.m., Monday, May 14, 1951.

Roll Call:

Present were President Cass, President-Elect MacLean, Speaker Alesen, Vice-Speaker Charnock, Councilors Shipman, Lum, Ball, Crane, Henderson, Dau, Ray, Montgomery, Pollock, Green, West, Heron, Thompson and Bailey, Secretary Daniels and Editor Wilbur. Absent for cause: Councilor Frees.

Present by invitation were Executive Secretary Hunton, Legal Counsel Hassard, county society executive secretaries Gillette of Fresno and Young of San Diego, Wilton L. Halverson, State Director of Public Health, Public Relations Counsel Clem Whitaker, Jr., and Ned Burman.

Present by invitation during parts of the meeting were Drs. E. Vincent Askey, L. Henry Garland, R. Stanley Kneeshaw and William L. Bender.

1. *State Department of Public Health:*

Dr. Wilton L. Halverson, State Director of Public Health, paid tribute to the value of the Conference of Local Health Officers, which was legally established several years ago and which he stated had performed an invaluable service in public health work in California. He complimented Mr. Hassard on his active part in creating this conference.

Dr. Halverson reported on hospital construction funds under the jurisdiction of his department and stated that the Hospital Advisory Council to his department has adopted a policy of making grants for hospital construction on the basis of minimal rather than maximal needs, in order to limit these funds to fundamentals which will meet the needs of the community.

On the subject of licensing of emergency or industrial hospitals, Dr. Halverson requested the cooperation of the Council in studying the need for inspecting and licensing clinics, with a view toward possible repeal of that section of the law. It was pointed out that these clinics now come within the jurisdiction of the State Board of Medical Examiners and that the code sections administered by the Department of Public Health may no longer be needed.

2. *San Joaquin Valley Migrant Workers:*

Dr. E. Vincent Askey discussed the possibility of cooperating with the National Council of Churches of Christ of America, a subject discussed at an earlier meeting of the Council. Dr. Dau recommended that such cooperation be extended and it was regularly moved, seconded and voted to give help and encouragement to this council, with the thought of making a contribution upon the presentation of a feasible plan for carrying out the objectives of the Council for assistance to the migratory farm workers of the San Joaquin Valley. It was agreed that a committee should study this problem and the chairman appointed Drs. E. Vincent Askey, Neil Dau and Donald Cass to make such a study and report back to a later Council meeting.

Adjournment:

There being no further business to come before the meeting, it was adjourned at 9:00 a.m.

* * *

382nd Meeting

The meeting was called to order by Chairman Shipman in Conference Room 6 of the Biltmore Hotel, Los Angeles, at 7:30 a.m., Tuesday, May 15, 1951.

Roll Call:

Present were President Cass, President-Elect MacLean, Speaker Alesen, Councilors Shipman, Lum, Crane, Henderson, Dau, Montgomery, Pollock, Green, West, Heron, Thompson and Bailey, Secretary Daniels and Editor Wilbur. Absent for cause: Vice-Speaker Charnock and Councilors Ball and Frees.

Present by invitation were Executive Secretary Hunton, Legal Counsel Hassard, county society executive secretaries Waterson of Alameda-Contra Costa, Gillette of Fresno, Young of San Diego, Public Relations Counsel Clem Whitaker, Jr., and Ned Burman.

Present by invitation during parts of the meeting were Drs. Earl Moody, Sam J. McClendon, Clifford Loos, Edwin L. Bruck, and Burt Davis.

1. *Medical Students:*

Dr. Burt Davis of Palo Alto urged the Council to take proper steps to encourage medical students to recognize the value of medical organizations. He suggested as one step the encouragement of university professors to maintain membership in medical societies, pointing out that some professors had dropped their memberships under current levels of state and county society dues.

2. *San Francisco Medical Society:*

On motion duly made and seconded, it was voted to recommend to the House of Delegates the issuance of a new charter in the name of San Francisco Medical Society (formerly San Francisco County Medical Society) upon the surrender of the charter previously issued.

3. *Invitation to American Medical Association:*

On motion duly made and seconded, it was voted to issue an invitation to the American Medical Association to hold its 1954 Annual Session in San Francisco.

4. *National Society for Medical Research:*

On motion duly made and seconded, it was voted to acknowledge receipt of the request of the National Society for Medical Research for a contribution of funds.

5. *Woman's Auxiliary to the C.M.A.:*

On motion duly made and seconded, it was voted to increase from $3,000 to $4,000 the annual appropriation of public relations funds made available to the Woman's Auxiliary for publication of its journal.

6. *National Conference on School Health:*

On motion duly made and seconded, it was voted to refrain from sending a representative to the National Conference on School Health. It was agreed that a representative to a former conference should be asked as to the value of such conferences to the Association.

7. *A.M.A. Council on Medical Service:*

On motion duly made and seconded, it was voted to request the C.M.A. delegates to the A.M.A. to ask that the Council on Medical Service of the A.M.A. be placed directly under the supervision of the A.M.A. Board of Trustees.

8. *Committee on Medical Economics:*

Dr. H. Gordon MacLean, chairman of the Committee on Medical Economics, recommended that the report entitled "Projection of the Dichter Report" be sent to all members of the Association and that copies of the complete original Dichter Report be made available to interested organizations. On motion duly made and seconded, these recommendations were adopted.

9. *1952 Annual Session:*

Dr. Albert C. Daniels, Secretary-Treasurer and Chairman of the Committee on Scientific Work, recommended that at the 1952 Annual Session the House of Delegates meet at 9 a.m. and the opening general scientific session start at 3 p.m. On motion duly made and seconded, these recommendations were adopted.

10. *Merced County Hospital:*

Drs. George B. Pimentel, James L. Dennis and Edward A. Jackson of Merced County placed before the Council a problem existing in that county in regard to the administration and policies of the county hospital. The Council was invited to send a committee to Merced to review the situation and was assured that the Board of Supervisors of the county would welcome such a committee. On motion duly made and seconded it was voted to instruct the Executive Committee to review the Merced County Hospital situation and to make recommendations.

11. *Committee on Clinical Material for Teaching Hospitals:*

Dr. William L. Bender, chairman of a special Committee on Clinical Material for Teaching Hospitals, presented the final draft of the committee's report on the acceptance of insurance cases for hospitalization by medical schools. The report included figures on four California and six out-of-state medical schools. On motion duly made and seconded, the report was accepted.

Adjournment:

There being no further business to come before the meeting, it was adjourned at 10:30 a.m.

* * *

383rd Meeting

The meeting was called to order by Chairman Shipman in Conference Room 6 of the Biltmore Hotel, Los Angeles, at 7:30 a.m., Wednesday, May 16, 1951.

Roll Call:

Present were President MacLean, President-Elect Alesen, Speaker Charnock, Vice-Speaker Henry A. Randel, Councilors Shipman, Lum, Ball, Dau, Ray, Montgomery, Pollock, Green, West, Heron, Thompson, Bailey, H. Clifford Loos, Arthur E. Varden, J. Philip Sampson, and A. A. Morrison, Secretary Daniels and Editor Wilbur. Absent for cause: Councilor Frees.

Present by invitation were Executive Secretary Hunton, Legal Counsel Hassard, Legislative Chairman Dr. Dwight H. Murray, county society executive secretaries Waterson of Alameda-Contra Costa, Wood of San Mateo, Donovan of Santa Clara and Gillette of Fresno, Public Relations Counsel Clem Whitaker, Jr., and Ned Burman, past presidents Donald Cass and R. Stanley Kneeshaw.

1. *Election of Council Officers:*

On nomination duly made and seconded, Dr. Sidney J. Shipman was unanimously elected Chairman of the Council.

On nomination duly made and seconded, Dr. Donald D. Lum was unanimously elected Vice-Chairman of the Council.

On motion duly made and seconded, Dr. Albert C. Daniels was appointed Secretary-Treasurer of the California Medical Association.

On motion duly made and seconded, Dr. Dwight L. Wilbur was appointed Editor of the official Journal.

On motion duly made and seconded, the firm of Peart, Baraty & Hassard was appointed legal counsel to the California Medical Association.

2. *Appointment of Auditing Committee:*

The Chairman, with the consent of the Council, appointed Doctors Lum (chairman), Heron and Montgomery as members of the Auditing Committee for the 1951-1952 Association year.

3. *Invitations to Council Meetings:*

On motion duly made and seconded, it was voted to invite the Vice-Speaker of the House of Delegates to attend all Council meetings.

4. *Public Policy and Legislation:*

Mr. Hassard reported that a bill to define diagnosis had passed the State Senate. Another bill re-

lating to the revocation of licenses upon conviction of a criminal offense has likewise been passed by the Senate.

Discussion was held on a bill to provide federal, state and county aid to the permanently and totally disabled. On motion duly made and seconded, it was voted to draw up an appropriate resolution in opposition to this measure and to express this opposition to the American Medical Association.

5. *Establishment of Per Diem and Mileage Allowances:*

On motion duly made and seconded, it was voted to establish the per diem expense allowance of officers and councilors at $25 and automobile mileage allowance at 8 cents per mile, effective as of May 15, 1951.

6. *Compensation of Editor:*

Discussion was held on the compensation to be paid the Editor, the opinion being expressed that his present compensation was inadequate. The Executive Committee was asked to review this and report its recommendations to the next Council meeting.

7. *Advisory Planning Committee:*

Mr. Hunton, chairman of the Advisory Planning Committee, discussed the report of that committee on a "grass roots" public relations program for the Association, based upon strengthening the individual physician-patient relationship. The entire report of the committee was read to the Council, including recommendations for employment of three field representatives, establishment within the county medical societies of active programs in the public interest, publication of pamphlets which physicians might give to their patients and advertising of the availability of such pamphlets. A cost of about $80,000 was estimated. In executive session the Council voted approval of this program and its establishment under the direction of the Executive Committee.

8. *Committee on C.P.S. Functions:*

Discussion was held on the possible membership of a committee to look into various aspects of California Physicians' Service, as requested in a resolution approved by C.P.S. Administrative Members. On motion duly made and seconded, it was voted to authorize the Executive Committee to consider nominations for this committee and to make appropriate appointments.

9. *Time and Place of Next Council Meeting:*

It was announced by the Chairman that the next meeting of the Council would be held in San Francisco on Saturday, June 23, 1951. (Subsequently, the Chairman reset the date of the meeting to June 24, 1951, to avoid a conflict with other sessions.)

Adjournment:

There being no further business to come before the meeting, it was adjourned at 11:40 a.m.

SIDNEY J. SHIPMAN, M.D., *Chairman*
ALBERT C. DANIELS, M.D., *Secretary*

Executive Committee Minutes

Tentative Draft: Minutes of the 226th Meeting of the Executive Committee of the California Medical Association, Los Angeles, May 16, 1951.

The meeting was called to order by Dr. Donald D. Lum at 11:45 a.m., Wednesday, May 16, 1951, in Conference Room No. 6 of the Biltmore Hotel, Los Angeles.

Roll Call:

Present were President MacLean, President-Elect Alesen, Speaker Charnock, Council Chairman Shipman, Auditing Committee Chairman Lum and Secretary-Treasurer Daniels. Present by invitation were Executive Secretary Hunton and Legal Counsel Hassard.

Election of Chairman:

On nomination duly made and seconded, Dr. Donald D. Lum was unanimously elected Chairman of the Executive Committee.

Adjournment:

There being no further business to come before the meeting, it was adjourned at 11:50 a.m.

DONALD D. LUM, M.D., *Chairman.*
ALBERT C. DANIELS, M.D., *Secretary.*

In Memoriam

BEAUDOUX, HENRY A. Died in Saratoga, May 20, 1951, aged 70, following a long illness. Graduate of the University of Minnesota Medical School, Minneapolis, 1895. Licensed in California in 1924. Dr. Beaudoux was a retired member of the Santa Clara County Medical Association, and the California Medical Association.

✣

CLARK, DONALD K. Died in Oakland, April 18, 1951, aged 61, of cirrhosis of the liver. Graduate of the University of Louisville School of Medicine, 1911. Licensed in California in 1916. Doctor Clark was a member of the Alameda-Contra Costa Medical Association, the California Medical Association, and the American Medical Association.

✣

DOCK, GEORGE. Died in Altadena, May 30, 1951, aged 91. Graduate of the University of Pennsylvania School of Medicine, Philadelphia, 1884. Licensed in California in 1922. Doctor Dock was a retired member of the Los Angeles County Medical Association, a life member of the California Medical Association, and an Associate Fellow of the American Medical Association.

✣

MARCHAND, MALVIN C. Died in Wendover, Nevada, May 19, 1951, aged 37, in an automobile accident. Graduate of the University of Kansas School of Medicine, Lawrence-Kansas City, 1943. Licensed in California in 1948. Doctor Marchand was a member of the Butte-Glenn Medical Society, the California Medical Association, and the American Medical Association.

MORRISON, RICHARD J. Died in Pacific Palisades, May 29, 1951, aged 71, of heart disease. Graduate of Stritch School of Medicine of Loyola University, Chicago, 1918. Licensed in California in 1920. Doctor Morrison was a retired member of the Los Angeles County Medical Association, and the California Medical Association.

✣

MULLEN, ROBERT M. Died in San Marino, April 28, 1951, aged 43, of coronary artery disease. Graduate of Duke University School of Medicine, Durham, N. C., 1934. Licensed in California in 1937. Doctor Mullen was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

✣

NEEDLES, JOHN W. Died in Redondo Beach, May 20, 1951, aged 40, of coronary artery disease. Graduate of the University of Southern California School of Medicine, Los Angeles, 1937. Licensed in California in 1937. Doctor Needles was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

✣

ROTH, HARRY A. Died in Long Beach, May 12, 1951, aged 44, of coronary thrombosis. Graduate of McGill University Faculty of Medicine, Montreal, 1930. Licensed in California in 1931. Doctor Roth was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

✣

STURDEVANT, MATTHEW C. Died in Los Angeles, May 18, 1951, aged 43, of a brain abscess. Graduate of the University of Southern California School of Medicine, Los Angeles, 1936. Licensed in California in 1936. Doctor Sturdevant was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

VIAU, BENJAMIN. Died in Sacramento, May 19, 1951, aged 61, of coronary artery disease. Graduate of Stanford University School of Medicine, Stanford University-San Francisco, 1916. Licensed in California in 1917. Doctor Viau was a member of the Fresno County Medical Society, the California Medical Association, and the American Medical Association.

✣

WELFER, CLARENCE R. Died in Los Angeles, May 6, 1951, aged 56, of acute coronary occlusion. Graduate of the University of Pittsburgh School of Medicine, Pennsylvania, 1919. Licensed in California in 1922. Doctor Welfer was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

✣

WILEY, EDWIN H. Died in Los Angeles, May 28, 1951, aged 73. Graduate of Northwestern University Medical School, Chicago, 1901. Licensed in California in 1905. Doctor Wiley was a member of the Los Angeles County Medical Association, a life member of the California Medical Association, and a Fellow of the American Medical Association.

✣

WILSON, HOMER S. Died in Lancaster, May 1, 1951, aged 68. Graduate of the University of Michigan Homeopathic Medical School, Ann Arbor, 1908. Licensed in California in 1921. Doctor Wilson was a retired member of the Los Angeles County Medical Association, and the California Medical Association.

✣

WOLD, ALVIN P. Died in Oakland, May 16, 1951, aged 55, of a brain tumor. Graduate of the University of Minnesota Medical School, Minneapolis, 1924. Licensed in California in 1928. Doctor Wold was a member of the Alameda-Contra Costa Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

Statement on Cancer Cures by the Cancer Commission of the C.M.A.

In recent months there has been a recrudescence in the daily press of claims for certain alleged cancer cures. Most of these receive the scant attention which they deserve and are soon forgotten. A few receive sensational publicity and are a source of considerable distress, both psychic and economic, to patients with cancer. In order to bring up to date the opinion of the Cancer Commission on this general question, it was resolved at the regular meeting of the Commission held in Los Angeles, May 1951, that a suitable statement bearing on this subject be prepared and issued to the press or to interested persons. The following is the statement as approved by the Commission:

From time to time there appear in the press, both public and professional, statements or claims regarding new cancer cures. Few of these statements or claims stand the test of time. Many prove a source of great mental and economic injury to persons suffering from cancer, to their relatives and friends.

The members of the Cancer Commission of the California Medical Association desire to give every aid in publicizing *reliable* methods of preventing and curing cancer. Many of them are actively engaged in research on the prevention, diagnosis and treatment of cancer. For that reason, the Commission believes it important to place some facts on record regarding this problem.

1. Cancer is an abnormal growth of tissue. The term "cancer" embraces an ill-defined heterogeneous group of diseases which vary greatly in natural history. Some types of cancer are very slow-growing and only locally invasive or malignant. Others are extremely rapidly growing and have already spread beyond likelihood of cure at the time an initial diagnosis is possible.

2. Owing to the variable nature of cancers or malignant tumors, it sometimes happens that there is difficulty in reaching a definite diagnosis even with the microscope. Sometimes conditions which strongly resemble cancer ultimately prove not to be, and go on to spontaneous cure. At other times, conditions which by all known tests are benign growths, turn out to be cancers. These situations are unusual, but indicate the need for adequate numbers of treated cases before claiming a cure.

3. The most reliable methods of cure for cancer are surgical and radiological treatment. A few special types of cancer can be temporarily controlled or relieved by chemical or drug treatment. In order to establish the reliability of a method of treatment, it is necessary for several patients to have been subjected to the method or drug in question, and to be studied for a period of years in order to confirm the fact that cure is permanent. It is therefore impossible to make dogmatic statements about the validity of many claimed cancer cures until a sufficient number of years has elapsed in order to permit proper assessment of results.

4. Most scientific workers do not make a secret of methods or drugs useful or potentially useful for human welfare. Most impartial and unbiased investigators make their method available for tests by some of the numerous agencies in this country created for assisting with such tests. The National Research Council has a Committee on Cancer Diagnosis and Treatment. Many universities have hospitals, clinics or individual investigators ready and willing to make scientific clinical studies on volunteer patients and other biological subjects. Only by prompt recourse to such tests will *facts* regarding apparent cancer cures become available to the public.

5. Not a single one of the several dozen cancer serums widely publicized in the public press during the last fifty years has stood the test of time.

Questions and Answers about C. P. S.

Question: What is the status of the proposed new C.P.S. Fee Schedule which was distributed to physician members a few months ago?

Answer: This proposed new fee schedule had been drawn up by the C.M.A. Fee Schedule Committee after lengthy study, and in March copies were sent to all C.P.S. physician members for their information. At the annual meeting of the C.P.S. House of Delegates in May it was voted to refer the proposed schedule back to the committee for further study, which is to be completed in six months. At the expiration of that time, the schedule will be resubmitted to the Council of C.M.A.

In conjunction with its action in directing further study, the House of Delegates also voted that, meanwhile, the existing C.P.S. fee schedule should continue to be used as the basis of payments for services rendered to C.P.S. beneficiaries. Therefore, while physician members have been provided with copies of the proposed schedule, they should not regard it as the "yardstick" of their payments for C.P.S. work—but should continue to refer to the existing fee schedule, the one dated September 1, 1949.

The answer to this question would not be complete without pointing out that, following the action taken by the House of Delegates, the C.P.S. Board of Trustees raised the percentage of payment under the existing fee schedule from 80 to 90 per cent, effective on all services performed on or after June 1. This is an "across the board" increase, applying to all procedures.

Question: If a married man is enrolled in one C.P.S. group and his wife is enrolled in another C.P.S. group, how is the new income ceiling applied? Is it $4,200 or $3,600?

Answer: Briefly, the answer is $4,200, but a fuller explanation is advisable so the reason will be clearly understood.

For services rendered on or after June 1, 1951, the $4,200 ceiling applies to *families of two or more persons* whose gross income for the preceding calendar year is less than $4,200. (Gross income is income from all sources, before taxes, and includes the husband and wife and dependent children under 19 years of age.) The $3,600 ceiling applies to single persons whose gross income is less than $3,600 for the preceding calendar year.

In the case of the husband and wife who are enrolled in separate C.P.S. groups, the reason the $4,200 ceiling applies is that they constitute a *family of two or more persons*. In other words, their C.P.S. income status is determined by their *family status*, not by the fact that they are enrolled separately (or singly) as C.P.S. beneficiaries.

Where there is doubt in the physician's mind as to whether the $4,200 or $3,600 ceiling applies to a patient, the best guide is to learn the patient's *family status*. If the family comprises two or more persons (including husband, wife and dependent children under 19 years—but not other relatives) the family income ceiling of $4,200 applies.

Question: I have heard that there has been some difficulty in securing authorizations for the treatment of Spanish-American War veterans. Is this so?

Answer: There is no difficulty, but physicians are reminded of a few differences in the handling of these accounts compared with other veteran cases:

1. All eligible Spanish-American War veterans must hold an honorable discharge; therefore no treatment should be given until an actual authority has been received, proving that eligibility has been established.

2. A Form 52 should be submitted in each case, and this form should list each and every disability for which the veteran seeks treatment. Such general diagnoses as "senile decay," "old age" or "general weakness" should be avoided.

3. A new request should be submitted for each change in diagnosis as treatment proceeds. These Spanish-American War veterans are entitled to care for any or all disabilities, but authority for each new condition must be secured.

4. The Veterans Administration will not grant retroactive authorization for treatment of a Spanish-American War veteran under any conditions, including emergency treatment. In cases of emergency, physicians should phone collect to the nearest VA regional office to get immediate authorization.

5. Visiting nurse service is available if necessary, but a special request form must be submitted. C.P.S. will forward these forms upon request.

6. Prosthetic appliances of all kinds are available for Spanish-American War veterans, but must be secured through the Prosthetic Appliance Division of the Veterans Administration, either in San Francisco or Los Angeles. Eye glasses are considered to be prosthetic appliances.

Question: If the form 53-C for requesting continued treatment of a veteran is misplaced, may I make my request by letter?

Answer: If this form is not at hand, request should be made on the physician's own letterhead to assure uninterrupted authorization. The request form for continued treatment is for the convenience of the physician's office in simplifying requests and as an aid to the C.P.S.-VA program in identifying the patient.

NEWS and NOTES

NATIONAL • STATE • COUNTY

LOS ANGELES

Dr. **Lowell C. Goin,** Los Angeles, was awarded a gold medal by the American College of Radiology during the recent American Medical Association session for distinguished and extraordinary service to the college and to the profession of radiology.

* * *

Dr. Emil Bogen, clinical associate professor of medicine at the University of California at Los Angeles School of Medicine, last month was elected president of the California Tuberculosis and Health Association for the year 1951-52. Dr. Bogen also was awarded the California medal for distinguished service in tuberculosis control.

* * *

The staff of Saint John's Hospital, Santa Monica, will hold its third annual **postgraduate assembly,** September 10 to 12, 1951, at the Elks Club, 21st Street and Wilshire Boulevard, Santa Monica. Dr. John C. Eagan, chief of staff, will be director of the assembly. Registration is open to all members of the medical profession.

SAN FRANCISCO

Dr. **Edwin I. Bartlett,** associate clinical professor of surgery and pathology at the University of California School of Medicine, San Francisco; **Dr. LeRoy H. Briggs,** William Watt Kerr Professor of Clinical Medicine, and **Dr. Howard C. Naffziger,** professor of neurological surgery and chairman of the department of neurological surgery, who are retiring as members of the faculty, were honored at the annual banquet of the school's alumni association, held last month.

* * *

The 79th annual meeting of the **American Public Health Association** will be held in San Francisco, October 29 to November 2. More than 5,000 specialists in public health are expected to attend this meeting and simultaneous meetings of the Western Branch of the A.P.H.S. and 38 related organizations. Dr. William P. Shepard will preside as president at the meeting. Headquarters for the main meeting will be the San Francisco Civic Auditorium.

Among the related organizations meeting with the association are: American Association of Registration Executives, American Association of Schools of Public Health, Association of Maternal and Child Health and Crippled Children's Directors, Association of State and Territorial Health Officers, Commissioned Officers Association of the U. S. Public Health Service, Conference of Municipal Public Health Engineers, Conference of Professors of Preventive Medicine, Conference of Public Health Veterinarians, Conference of State and Provincial Public Health Laboratory Directors, Conference of State Directors of Public Health Education, Society of Public Health Educators, Conference of State Hospital Personnel, Conference of State Sanitary Engineers, Council of State Directors of Public Health Nursing, Civil Affairs Committee of Military Government Public Health Society, Public Health Cancer Association, and National Organization for Public Health Nursing.

At the 1951 meeting of the American Psychiatric Association, Dr. Jurgen Ruesch, associate professor of psychiatry at the University of California School of Medicine, and his associates at the Langley Porter Clinic, Robert E. Harris, Ph.D., Carole Christiansen, M.A., Martin B. Loeb, B.A., Sally Dewees, M.S., and Annemarie Jacobson, M.D., were presented the **Hofheimer Award for research in psychiatry.** The prize was awarded for a sociopsychological study of patients with duodenal ulcer. The results of the inquiry were published in book form by the University of California Press in 1948.

GENERAL

Dr. Frank H. Krusen of Rochester, Minnesota, chairman of the **Baruch Committee on Physical Medicine and Rehabilitation,** announced recently that the committee had achieved its goals and was discontinuing its activities. At the same time Mr. Bernard M. Baruch, New York City, the sponsor of the committee, which has been active since November 1943, announced that he was watching the institutions to which he had made grants, on recommendation of the committee, and that it was his object to make further grants "to those who undertake the work with enthusiasm and beneficial results." The committee had been formed by Mr. Baruch to develop and advance the special field of medicine devoted to the diagnosis and treatment of disease by physical agents and to the rehabilitation of disabled persons.

* * *

Expressing concern over the **waste of medical personnel** and facilities entailed in uncoordinated programs being carried out by various government agencies at a time when military and civilian defense demands are of grave importance, 21 members of the National Advisory Board of the Doctors Committee for Improved Federal Medical Services have petitioned Congress for immediate legislative action based on recommendations of the Hoover Commission on federal medical services.

* * *

The third annual postgraduate course on **Psychiatry for the General Practitioner** will be offered at the University of Colorado Medical Center July 26, 27, 28, 1951. The course will deal with prevalent psychiatric concomitants in general practice, with emphasis on psychotherapy. The practical nonspecialized aspects of psychiatry in general medicine will be emphasized. Information regarding registration and fees may be obtained from the Office of the Director of Graduate and Postgraduate Medical Education, 4200 East Ninth Avenue, Denver 7, Colorado.

* * *

Delegates to the annual spring convention of the American Council of Christian Churches unanimously passed a resolution reaffirming the organization's **stand against socialized medicine.** "Freedom of the individual, freedom of the doctor, and freedom of medical research are essential to the preservation of a free society," the resolution stated.

POSTGRADUATE EDUCATION NOTICES

UNIVERSITY OF CALIFORNIA SCHOOL OF MEDICINE—Medical Extension, San Francisco

Gynecological and Obstetrical Conference:

August 29 through 31, 1951. Room 104, University Extension Building, 540 Powell Street, San Francisco. Fee: $50.00.

Ophthalmology:

September 10 through 14. Medical Center, Parnassus and Third avenues.

This course, for specialists, is a continuation of programs offered in 1947, 1948, and 1949.

Evening Symposia in Medicine:

Sept. 10 through Nov. 26 (every Monday evening). Medical Center, Parnassus and 3rd avenues.

This is a series of evening exercises for general practitioners in the form of symposia on topics of particular interest to them.

Contact: Stacy R. Mettier, M.D., Medical Extension, University of California Medical Center, San Francisco 22, California.

STANFORD UNIVERSITY SCHOOL OF MEDICINE

Postgraduate Medical Courses for Practicing Physicians:

In cooperation with the San Francisco Department of Public Health and the San Francisco Hospital.

September 10, 11, 12, 13, 14, 1951.

Morning Courses: Monday, Tuesday, Wednesday, Thursday and Friday—8:30 a.m. to 12 noon.

COURSE 1—GENERAL MEDICINE (San Francisco Hospital—Limited to 20 physicians). Discussion of development, diagnosis, treatment and prognosis of various diseases will stem from cases presenting problems in internal medicine.

COURSE 2—GENERAL SURGERY (Stanford Hospital—Limited to 20 physicians). Selected general surgical topics will be reviewed in a series of ward rounds, clinics and lectures. Emphasis will be on the practical aspects of surgical treatment.

COURSE 3—UROLOGY FOR THE GENERAL PRACTITIONER (Stanford Hospital—Limited to 20 physicians). A practical course in the diagnosis and treatment of common urologic conditions. Detailed consideration will be given to office treatment, the use of modern antibiotics, infertility in the male, pyelographic interpretation, and to indications for and types of cystoscopic and operative procedures.

COURSE 4—PRACTICAL DERMATOLOGY (Stanford Hospital—Limited to 25 physicians). A practical course designed to emphasize diagnosis and treatment of the common dermatoses. Instruction will consist of numerous case presentations and discussions.

COURSE 5—DIAGNOSIS AND TREATMENT OF TUMORS (Stanford Hospital—Limited to 25 physicians). Cancer of the most frequent and accessible sites will be emphasized. Differential diagnosis, standard treatment and recent therapeutic developments will be stressed. The presentations will be didactic with critical discussion in which students will be invited to participate actively.

COURSE 6—GENERAL SURGERY (San Francisco Hospital—Limited to 30 physicians). General surgical ward rounds; groups of ten to single instructor.

COURSE 7—SURGICAL ANATOMY (Stanford Hospital—Limited to 20 physicians). Dissection of special regions and instruction and practice in the technique of various operations will be conducted in the dissecting room.

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Afternoon Courses: Monday, Tuesday, Wednesday, Thursday and Friday—1:30 p.m. to 5:00 p.m.

COURSE 8—GENERAL MEDICINE (Stanford Hospital—Limited to 15 physicians). Clinical problems as they are affected by advances in fundamental knowledge will be discussed in selected fields. The subjects presented will be: pulmonary physiology and disease, hemorrhagic states, diabetes mellitus, syphilis, nutrition and the vitamins, electrolyte and water metabolism and the clinical use of cortisone and ACTH.

COURSE 9—SURGICAL ANATOMY (Stanford Hospital—Limited to 20 physicians). Dissection of special regions and instruction and practice in the technique of various operations will be conducted in the dissecting room.

COURSE 10—CARDIOLOGY (San Francisco Hospital—Limited to 25 physicians). Recent advances in clinical cardiology with sections devoted to electrocardiography and newer diagnostic methods and to present day medical and surgical treatment of cardiac disease.

COURSE 11—OBSTETRICS AND GYNECOLOGY (Stanford Hospital—Limited to 25 physicians). Informal discussions and demonstrations concerning amenorrhea, dysmenorrhea, disturbed uterine bleeding, birth trauma lesions, bleeding in pregnancy, therapeutic abortion, breech presentation, use of forceps, endometrial cancer and cytology in relation to incipient malignancy.

COURSE 12—PSYCHIATRY FOR GENERAL PRACTITIONERS (Stanford Hospital—Limited to 25 physicians). A presentation of the principles of psychiatry in general medical practice. Emphasis is on the practical procedures in diagnosis and treatment of commonly encountered disorders, especially in the psychosomatic area. Case presentation and panel discussion.

COURSE 13—ENDOCRINOLOGY (Stanford Hospital—Limited to 25 physicians). The course will summarize the physiology, the diagnosis and the treatment of disorders of the pituitary gland, the adrenals, the thyroid, and the male and female gonads. The management of diabetes, the metabolic effects of ACTH and cortisone, the parathyroids and bone disease, and the clinical uses of the sex steroids will be discussed. Lectures, case demonstrations and panel discussions.

COURSE 14—PEDIATRICS (Stanford Hospital—Limited to 25 physicians). Therapy in Pediatrics: Recent advances in therapy as it applies to infants and children will be discussed.

INFORMATION

You and Blue Shield

[The author of the following article is Frederick W. Slobe, M.D., Assistant Director and Medical Director, Blue Cross Plan for Hospital Care and Illinois Medical Service, with headquarters in Chicago, and Medical Director, Illinois Medical Service. The article is reprinted, by permission, from the *Illinois Medical Journal* issue of March 1951.]

You, as a physician, are a part of Blue Shield . . . so, naturally, you are concerned about it. You are a part of it because Blue Shield is always sponsored by a medical society. In Illinois, at least 51 per cent of the doctors in a county must sign cards as participating physicians, and the county medical society must take official action approving a Blue Shield Plan before it can become operative in that county. So the physicians really underwrite Blue Shield in a moral sense at least; occasionally in a financial sense too—for example, should a Plan get into financial difficulty, physicians might be expected to accept a reduced schedule of allowances; also, in service Plans with a low income limit the doctors may subsidize the Plan partially. The State Department of Insurance considers this backing of Blue Shield by a majority of physicians in a county to be most significant and necessary. Once the cards have been signed, most Blue Shield Plans, if of the indemnity type, make no distinction between a participating physician and one who has not signed the cards . . . making payments to all according to the schedule of allowances, the only requirement being that the physician to whom payment is made must be licensed to practice medicine and surgery in all its branches in the state where services are rendered. So you are really a part of Blue Shield whether or not you signed a card because of action taken by your medical society.

You know Blue Shield is an important part of the voluntary insurance movement. It has 16 million members and is growing rapidly. It operates on the not-for-profit principle in order that the maximum percentage of each premium dollar be utilized to pay or help pay for physicians' services. Blue Shield believes in the profit motive in business, in free enterprise, competition and incentive. But the type of protection offered by many private insurance companies in the past did not seem to be a good enough "buy" to the consuming public. And the popularity of Blue Cross was an important factor in influencing medical societies to establish Blue Shield as a companion Plan. Besides, there is room for all in the battle against compulsory health insurance. It is an obvious fact that the competition by Blue Cross and Blue Shield has been a decided influence in effecting improvements by the private insurance companies as regards contractual benefits. These improvements, in turn, act as a constant stimulus to the non-profit Plans. The result is a steadily expanding service to the public.

You may have wondered why there are several Blue Shield Plans in Illinois. That is simply because county societies in various sections have seen fit to organize their own Plan . . . usually in cooperation with a Blue Cross Plan. Those who fear "bigness" and alleged monopoly think this is sound. Others, however, are fearful about this and point to the success in our sister state, Michigan, where the Blue Shield Plan, "Michigan Medical Service," sponsored by the state medical society, has a membership of over 1,900,000 members. They are also concerned about future confusion in overlapping areas within a state, friction, diminished efficiency and impaired public relations as a result.

Of importance to you is the fact that Blue Shield is commonly known as "The Doctors' Own Plan." The responsibility and obligation implied here are obvious. If a Blue Shield Plan is badly administered . . . if it gets into financial difficulty . . . if its contractual provisions are inequitable . . . if the physicians do not cooperate . . . if the subscribers have legitimate complaints not satisfactorily answered, both the Blue Shield movement and the medical profession suffer. If the doctors' charges are exorbitant and out of proportion to the patient's ability to pay, the subscriber rightfully feels that membership in Blue Shield has been of no appreciable value because of the disproportion between the Blue Shield allowance and the doctor's fee. The same would apply if a physician, because of his patient's having Blue Shield coverage, increased his usual fee by an amount equal to the Blue Shield allowance. In such instances, the protective value of insurance coverage is lost.

Blue Shield does not fix the doctor's fee (if the Plan is of the indemnity type); and free choice of doctor and hospital are maintained always. Blue Shield does not practice medicine; and it is not within its scope to question either the doctor's charges, operative indications or procedures employed. The medical societies, however, *are* keenly interested; having either initiated or approved the program, they have a responsibility and an obligation too . . . and that is why county or state medical societies have professional relations or advisory committees for Blue Shield with the exclusive function of carefully observing the relationship between the physicians, Blue Shield and the public. These committees are concerned about public relations

and grievances. They contact physicians by letter or phone and may refer matters to appropriate committees for final disposition.

Since physicians have this responsibility, it follows that they should control Blue Shield Plans and such is the case. The majority of trustees are physicians although lay representation is recognized as an indicated procedure.

The public is the consumer of medical care and the consumer must be protected if the voluntary Plans are to serve their purpose as the chief bulwark against compulsory health insurance.

Blue Shield, then, is *your* contribution toward supplying a nonprofit medical care Plan to help pay or pay medical costs. It is *your* contribution to furnish an important component in the voluntary health insurance field . . . as opposed to the compulsory political type. So your support is essential. This includes explaining it to your patients, friends and business contacts. Your secretary needs to know about it too. Filling forms out promptly and completely is important. The more information you furnish, the better can the disbursing department of Blue Shield evaluate your cases. There is no violation of confidence involved since every Blue Shield member authorizes this upon joining. And unless your fee is stated, Blue Shield cannot obtain statistics as to what percentage of doctors' bills it pays.

In general, there are two types of Blue Shield Plans—the "indemnity" type and the "service" type.

THE INDEMNITY PLANS

In the "indemnity" Plans, payments are made to physicians, according to a fixed schedule of allowances, the physician being privileged to charge the patient the difference between his fee and the allowance received. Hence the allowance neither fixes nor bears any relationship to the physicians' charges. There are many, especially leaders of organized labor, who have voiced dissatisfaction with the indemnity principle. The chief objection has been that, where indemnity contracts prevail, too small a percentage of the physician's fee is covered by the Blue Shield allowance.

This objection might be obviated: (1) if payments under an indemnity schedule were large enough to equalize the average prevailing charges; and (2) if physicians, in such instances, would charge the average patient approximately what the Blue Shield allowance amounted to. This would require a moderate increase in subscription rates but appeals to the physician because it does not conflict with his traditional method of practice and billing.

THE SERVICE PLANS

In the "service" type, where the member or the member's family income does not exceed a stipulated amount, the physician agrees to accept the Blue Shield allowance as payment in full, but is privileged to charge an additional amount to equalize his fee when the family income exceeds the stipulated level. Thus, most service contracts are really a combination of both types — being of a "service" type when family income does not exceed a certain level . . . and an "indemnity" type when income does exceed such level.

The "service" Plans appeal to the public because no additional payment need be made to the physician unless the family income exceeds a stipulated amount, in which case the Plan operates on the indemnity principle. Some Plans have more than one service contract with different income limits; for example, $3,000 and $5,000. Selling at different rates, they fit the financial resources of the members; also, the allowances in the latter may range from 30 to 100 per cent higher than in the former. The decision as to income level is usually left to the physicians—sometimes the member is asked to fill out a brief form; rarely is difficulty experienced on this score. If this income level is set at $5,000 for example, it would include about 80 per cent of the population in most communities . . . and physicians' fees for this 80 per cent would be fixed at the Blue Shield allowance. This upsets the traditional system and is disquieting to many physicians. There are others who feel that this is part of the physicians' contribution to the battle against socialized medicine. They feel that some change and adjustment is necessary to meet the demands of masses of people despite all our efforts toward education. Physicians are inherently altruistic; monetary gain has never been their motivation; they know that no financial reward can ever be measured to compensate them for having saved a life; they do not expect their services to be compensated on the basis of a lawyer or broker; and many of them are perfectly willing to subsidize a Blue Shield Plan. Financial loss, however, does not appear to accrue where well integrated service Plans are in operation with a high enough income limit and a correspondingly adequate schedule of payments. In such instances, the income of physicians appears to be maintained at the previous level. In this connection, Dr. Louis F. Middlebrook of Connecticut Medical Service has said: "It has been my impression from talking with both participating physicians and with subscribing member-patients that because of rapid settlement of claims and 100 per cent collections, payments on cases that otherwise would have been staff cases without remuneration for the physician, and on others which would have been impossible or difficult to collect, the net result has been increased remuneration for the physician and improved services to the patient." One reason for this is a sufficiently high rate to enable payments substantially higher than exists in most indemnity Plans.

The public is invariably enthusiastic about service Plans. People say it is the profession's positive and satisfactory answer to political medicine. The trend is strongly toward the service Plan philosophy and it behooves us to study the matter impartially. We should probably ask ourselves why it should not be successful here if it is successful in other states.

Indeed, the "service" philosophy . . . namely, fur-

nishing complete or virtually complete hospital or medical service instead of dollars . . . is the unique and most popular feature of most Blue Cross and Blue Shield Plans.

If the Blue Shield Plans in Illinois are successful, it will be largely because of your attitude, understanding and cooperation. Of those favoring compulsory health insurance, some think so because of unfavorable experiences with physicians' charges; others because they believe the average person cannot pay the cost of a hospitalizing illness. The first criticism can be met through education of the profession and in the exceptional, justified case by referral to the grievance committee of a medical society. The second criticism can be met by voluntary insurance if most, if not all, of the medical bill is paid and if coverage is available to most of the people. A third requisite is that the rate charged for such coverage is one which the people can afford to pay. It is difficult to reconcile these needs without having recourse to the "service" type of certificate and rendering available individual as well as group enrollment.

Dr. H. L. Childs has said that the "success of free enterprise system depends upon providing the best possible service to the largest number of people at prices they can afford to pay." This statement is applicable to medical service too. Blue Shield aims to help people do this. How far it will succeed depends on you.—F. W. S.

BOOK REVIEWS

PHYSICAL DIAGNOSIS. By Ralph H. Major, M.D., Professor of Medicine, The University of Kansas. 4th edition. Illustrated. W. B. Saunders Company, Philadelphia. 1951. 446 pages. $6.50.

The fact that this textbook on physical diagnosis has reached a fourth edition bespeaks its worth. It is one of the standard books on the subject. In each edition the author has improved the work by correction of inevitable errors, by improvements and additions to the text and by the further use of diagrams and illustrations. The fourth edition continues this trend.

The book is well organized. The material is presented in the sequence commonly followed in the performance of a physical examination. The text is well written and easy to read. An enlivening feature is the author's frequent quotation from classical descriptions together with interesting and pertinent anecdotes. Dr. Major believes, with Osler, that "when you can, read the original descriptions of the masters, who with crude methods of study, saw so clearly." Pertinent new facts and new interpretations are included. The material is thoroughly up to date. The whole is blended into a concise, interesting and easily readable text.

An outstanding feature of the book is the liberal use of diagrams and photographs. Many have been added and others have been improved since the earlier editions. They effectively supplement the text and greatly add to the interest of the book. Each chapter is concluded with a bibliography which documents the material of the text. As one might expect, the bibliography contains many references to classical descriptions which would be particularly valuable to those who are interested in the history of medicine or to those interested in further study.

All in all, this book is an excellent text on physical diagnosis. It presents the subject readably and effectively, with thoroughness and with perspective. It should be useful to the student, teacher and practitioner.

* * *

PRINCIPLES OF PUBLIC HEALTH ADMINISTRATION. By John J. Hanlon, M.S., M.D., M.P.H., Associate Professor of Public Health Practice, School of Public Health, University of Michigan. The C. V. Mosby Company, St. Louis, 1950. $6.00.

This book should be interesting and valuable for every physician who recognizes professional responsibilities beyond those of private practice. From it, he can enhance his understanding of the motives and methods of public health workers. Hanlon devotes a section of 80 pages to the philosophy and background of public health, and maintains that successful workers in this field must be strongly idealistic. The shocking, abominable state of affairs under which life was lived a century and more ago is recounted, and the growth of a community conscience which led to the alleviation of these conditions is clearly set forth by the extensive use of quotations from the leaders in medicine, sanitary science, and social welfare of the nineteenth and early twentieth centuries. Reading this, one can see how present-day public health workers may be impatient at delay in bringing all of our present knowledge of preventive medicine to all the people.

The introductory section also includes an extensive development of data on the economic value of public health work. Examples drawn from this should be effective in convincing laymen that support of well-designed preventive medical programs is a good investment.

Physicians interested in medical economics and the interrelationships of government and medicine will find valuable background material on the growth of the Federal government programs which have modified activities in local health departments so markedly. Hanlon appears to be an open-minded conservative in his discussion of these matters. He devotes little space to the consideration of medical treatment or hospitalization as a public health measure, even for such diseases as tuberculosis and syphilis. He repeatedly emphasizes the important role to be played by private practitioners in a well-developed public health program. In his presentation of doctor-patient-government relationships, he strives to present facts on all sides of the issues and in general to let the reader draw his own conclusions.

The chapters on managing the work of others are done well. Although much of the material is obviously plain common sense, its presentation in a systematic and orderly way will help one to remember it and to use it in those times of stress when it is most needed. Although this material is addressed to a specific group, the principles and methods outlined can be used profitably in the private office, the home, or in the professional society equally well. Other topics covered include fiscal management, legal considerations, public relations, and the programs under the principal health department divisions, such as vital statistics, child and maternal health, and so on. Industrial hygiene services are slighted.

The main criticisms refer to form, rather than content: There is a frequent lack of juxtaposition between the tables and figures and the related text. The captions of the tables and figures are not as clear as they might be, in some instances.

On the whole, this is a well-balanced, well-written, informative book, certain to be of value to public health workers, and likely to be interesting to many others.

* * *

CANCER AS I SEE IT. By Henry W. Abelmann, M.D., The Philosophical Library, New York, 1951. 100 pages. $2.75.

This little book presents the author's interpretation of his observations and research on cancer in the last 45 years. The theme developed throughout is that all malignant disease is caused by a microscopic organism, and that all types of cancer are different manifestations of the invasion of this organism. Genetics and irritation are considered as predisposing factors in diminishing cell resistance, but the real cause is this pleomorphic parasite which he designates as a "mold fungus" and later as a "germ virus."

Included in this common etiology are all types of carcinoma, sarcoma, pernicious anemia, leukemia, Paget's disease, Hodgkin's disease, mycosis fungoides, and precancerous hyperplasia (which is called cancer granuloma). The type of cancer produced is due to the stage of pleomorphism and the reaction specific to each type of cell which it attacks. Melanomas are caused by a black mold fungus and chloroma by a green mold fungus.

The pleomorphic stages of this cancer parasite are considered to cover the spectrum of microscopic biology from a mold to the ultramicroscopic virus. In the mold stage, infiltration of the interstitial tissues causes a chronic inflammatory cancer granuloma. In the virus stage the parasite penetrates the cell membrane of a somatic cell and makes it a cancer cell, giving that cell all of its malignant characteristics.

The author considers the various inclusion bodies reported in cancer from the time of Virchow and San Felecis to Dr. Irene Miller, not as contaminants but as different forms of the organism that causes cancer. "The pleomorphic germ endowed with different properties can explain all the

diverse and curious phenomena met with in cancer." "Cancer is caused by the infection of a body cell, and there are therefore as many kinds of cancer as there are different kinds of body cells."

The major source of infection by the cancer germ is considered to be from the soil and through foods. Thus, care in what we put into our stomachs is considered the first line of defense in the prevention of cancer.

In addition to developing his unique and unproved hypothesis, Dr. Abelmann emphasizes the need of early diagnosis, public education and periodic examination. He suggests that a national cancer day should be set aside to make the public cancer-conscious.

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DIMENSIONAL ANALYSIS FOR STUDENTS OF MEDICINE. By Harold A. Abramson, M.D., Assistant Clinical Professor of Physiology, Columbia University. The Josiah Macy, Jr., Foundation, 565 Park Avenue, New York 21. 1950. 41 pages. $1.00.

A sharp tool is a terrible temptation—for instance, mathematics. As a former sinner, the reviewer sympathizes with Dr. Abramson, but unhappily the author's dimensional analysis and sympodism and psychomotive forces are not impressive. His introductory statement, "No amount of purely mathematical reasoning can ever take into consideration the complexity of the emotional factors," may some day prove exaggerated, in consequence of vector analysis; but even granting the power of mathematics, this reviewer is not a bit converted to Dr. Abramson's eagerness to pump that kind of reasoning into psychiatrists.

Students of medicine, to all of whom Dr. Abramson directs his book, will (1) as a body prefer to work at the care of patients, or (2) if in research medicine, prefer fuller treatment of the subject, such as Griffin's "Mathematical Analysis" and Fisher's "Statistical Methods for Research Workers."

* * *

METHODS IN MEDICINE—The Manual of the Medical Service of George Dock, M.D., Sc.D., Formerly Professor of Medicine, Washington University School of Medicine; Formerly Physician-in-Chief, Robert A. Barnes Hospital, St. Louis. A Comprehensive Outline for Clinical Investigation, Management and Treatment of Patients with Various Medical Disorders. By George R. Herrmann, M.D., Ph.D., Professor of Medicine, University of Texas Medical Branch at Galveston. Second edition, completely revised. 488 pages. The C. V. Mosby Company, St. Louis, 1950. $7.50.

This book is presented as a practical bedside guide for the clinical investigation of the common as well as some of the more rare medical conditions. It is intended for interns, residents, and practitioners, and details what the author considers minimal requirements for diagnostic study and medical management. Dr. Herrmann calls it a revision of the manual which he published 26 years ago, but actually it is a new book. Despite this the author, unfortunately, has hung on to certain items which, though useful in 1925, are of historical interest only in 1951.

The book has both good and bad points. It can be very handy as a compendium, listing a variety of information in its contents. It includes data on methods of history and physical examination, laboratory procedures and therapeutic methods. The material shown has very definite interest, but the reviewer finds himself not infrequently at a loss to explain why some items are in and others out. For instance, in a short summary of antibiotics, such a little-used one as Nisulfazole is given mention in the quite limited space available. The bibliography is also spotty: References are given for the management of renal stones and peripheral vascular disease, but none for irritable colon, nephritis or rheumatoid arthritis. Some of the methods are followed through thoroughly, but many others end up in a blind alley. In this regard one may mention the discussions on biopsy of muscle (page 163) and on the technique for counting peripheral blood (pages 44-48). If one did not already know the techniques, he would have to look further than this book.

The style is very authoritative, which may irritate some readers, particularly when statements are inaccurate; for example, on page 277 the author states that the Takata test "has been found to be positive in any disease in which the serum globulin is over 3 per cent" (an erroneous conclusion of the year 1934).

The book cannot be recommended to the practitioner to employ for casual reference or detailed investigation on a given case. On the other hand, in a hospital which may adopt it as a methodology, it has a field of usefulness as a vade mecum for the intern.

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SKULL FRACTURES AND BRAIN INJURIES. By Harry E. Mock, M.D., Consulting Surgeon, St. Luke's Hospital, Chicago, Associate Professor Emeritus of Surgery, Northwestern University Medical School. The Williams and Wilkins Company, Baltimore, 1950. 806 pages. $13.50.

A very comprehensive review of head injuries, skull fractures and brain injuries, written from the standpoint of the general surgeon. The author has had a most extensive experience in the management of head injuries and presents a very complete account of his wide experience. Since the vast majority of head injuries are seen by those other than neurosurgeons, this volume represents an excellent addition to the library of every practicing physician.

It is written in too great detail to be used as a textbook, but can be heartily recommended as a complete source of reference concerning the diagnosis, management and complications of head injuries. Dr. Mock presents a plan of management of these patients which, if adequately followed, no doubt would result in a definite lessening of mortality from such injuries. Many controversial points are discussed, and included therein are the views of numerous specialists in neurological surgery.

* * *

THE CLINICAL USE OF RADIOACTIVE ISOTOPES. By Bertram V. A. Low-Beer, M.D., Associate Professor of Radiology, University of California Medical School, San Francisco, Calif. Charles C. Thomas, publisher, Springfield, Illinois, 1950. $9.50.

Part One, 128 pages, concerns physics, measurements, and radiation hygiene, with seven tables and 27 figures, a list of 43 books, and references to 40 authors, not keyed into text. Part Two, clinical applications, fills the rest of the book, including bibliography of 11 books and 327 references keyed into text. There is also an appendix of useful factual data and dosage computations and an extensive table of isotopes. The index is fairly detailed, occupying 25 columns, and omits authors. This part has 58 figures, also four pages of color plates concerning the author's investigation of P_{32} on blotting paper for treatment of skin lesions. Many of the figures are graphs, which with 34 tables give a good quantitative understanding.

This volume, in contrast to so many "edited" textbooks recently published, is all by one hand, which gives it a good unity of treatment. The coverage is very broad. The numerous clinical investigations with tracers and for therapy are grouped under the isotope concerned (12 elements). Therapy with P_{32}, Na_{24}, I_{131} and Co_{60} is covered in a chapter of 65 pages, preceded by 16 pages on the computation of internal dosage. The author is a practitioner of radiation therapy of long and wide experience, with a thorough grounding and containing professional contacts for nuclear physics and radiobiology. This wedding of theory and clinical experience in the one mind gives the book an unusually firm foundation. With the advances attained already and the bright future promise of radioisotopes in clinical medicine, every radiologist would do well to read this book and keep it handy.

It is a serious duty to be prepared to take proper part in isotope committees as they are being set up in more and more hospitals so as to take advantage of the availability of these valuable tools (isotopes) through the Atomic Energy Commission. The fact that the science and art is moving fast, and that the book will soon be outdated, does not lessen its present usefulness.

* * *

CHECK—Community Health Educator's Compendium of Knowledge. By Clair E. Turner, A.M., Ed.M., D.Sc., Dr.P.H., Professor of Public Health Emeritus, Massachusetts Institute of Technology. The C. V. Mosby Company, Baltimore. 1951. 266 pages. $3.00.

If some bright and enterprising surgeon with an encyclopedic memory, photographic mind, and years of successful experience would pack into a small reference-size manual of 225 pages the essentials of the basic sciences as they apply to the surgical art, the psychological and physical characteristics of the patient, important diagnostic criteria and surgical indications, briefly outline the technique covering the major procedures, and at the same time append a wealth of social material, that author would do for surgery what Professor Clair E. Turner has done for the art of health education.

This neat little volume in a board binding with the catchy title, "Check," cannot be summarized, abridged, or abbreviated, because it is pure essence in itself. The author presents his ideas in three parts: Part One, Basic Principles; Part Two, Working with People; Part Three, Media of Group Communication. In addition, there are a useful appendix and a helpful bibliography.

While Professor Turner presents his material from the standpoint of one primarily interested in public health education, and while the activities described and the factual material contained are directed toward that end, he calls upon a basic knowledge of the human individual and the manner in which that individual reacts under different circumstances to propose a method of leading him into a favorable acceptance of new ideas concerning his own health and the environment that contributes to it in such a comprehensive manner that the techniques described would be equally applicable to any phase of human relations.

Part One, "Basic Principles," deals with the nature of community health education, the development of public health education and the scope of health education, and outlines where health education occurs. The functions, personal qualifications and techniques of the community health educator are indicated. As a part of this latter discussion, a job performance check list is presented consisting of a group of requirements that could well be imposed upon a worker in any field of endeavor. Just a few of these will illustrate the kind of thinking involved:

Carries assignments through to completion.

Carries out assignments promptly.

Organizes work well.

Makes accurate analysis of situations.

Discriminates between essentials and nonessentials.

Is capable of meeting emergencies.

Keeps up to date on improved techniques and procedures in work.

Accepts responsibility for errors of own making.

Chapter VI of Part One, entitled "Motivation," states that public health education is concerned primarily with the development of attitudes and actions and presents a series of reasons as determined by experience why individuals do and do not accept a program of hygienic practices. On page 37 of this same chapter, fundamental human wants are analyzed and the health educator is advised to build his program in such a way as to appeal to these basic human wants. "Health is an abstraction. To the sick it means freedom from the distressing symptoms of disease. To the well person and the general public its value is primarily what it enables one to be, to do, and to acquire." The four categories to which appeal is made are:

1. The want for a feeling of personal worth.
2. The sex want (the family and the race).
3. The want for a livelihood (fear of being poor).
4. The want for variety.

In Part Two is presented a wealth of material on the techniques of working with people. This is outlined step by step beginning with the individual conference, proceeding to group thinking, covering general meetings and community organizations and campaigns. The importance of the individual and his own personality in presenting appealing ideas to other individuals and to groups is emphasized. Suggestions are made as to the kind of approaches most likely to succeed and those doomed to failure.

Part Three, "Media of Group Communications," is more specific in its analysis of the available media of communicating ideas. The principles underlying group communications are elaborated. Skillful writing, effective speech, radio and television, newspapers, printed matter, magazines, books, letters and questionnaires, pictures and graphs, motion pictures and exhibits, all receive technical evaluation even to the point of instructions as to how to read and correct a galley proof or as to what constitutes the best type of halftone for reproduction.

The style and mode of this compendium are indeed different and original with the author. After reading and thoroughly enjoying Professor Turner's "Check," your reviewer was faced with just one question: Have we in medicine been too busy, too stupid, or just too lazy so that it has been necessary for a layman to take the lead in an activity which primarily should be our responsibility?

* * *

TEXTBOOK OF PHYSIOLOGY AND BIOCHEMISTRY. By George H. Bell, B.Sc., M.D. (Glasg.), F.R.F.P.S.G., F.R.S.E., Professor of Physiology in the University of St. Andrews at University College, Dublin; J. Norman Davidson, M.D., D.Sc. (Edin.), F.R.F.P.S.G., F.R.I.C., F.R.S.E., Gardiner Professor of Physiological Chemistry in the University of Glasgow; and Harold Scarborough, M.B., Ph.D. (Edin.), F.R.C.P.E., Professor of Medicine in the Welsh National School of Medicine of the University of Wales. The Williams and Wilkins Company, Baltimore, 1950. 918 pages. $9.00.

Structural biochemistry without relation to function holds little interest for the medical student or practitioner, or for that matter, for the investigator of the dynamic aspects of medicine. Likewise, physiology without a basis in chemistry is inadequate. The three authors of this book, a physiologist, a biochemist and a clinician, unite their efforts in the production of a skillfully and interestingly written introduction to the subjects of mechanical and chemical physiology. Chapter I is a general introduction with the following opening statement:

"The subjects of Physiology and Biochemistry comprise the study of living matter at two different levels. The biochemist studies biological systems at the molecular and atomic level, while the physiologist is concerned with the intact organ, or the whole organism. Both have a dynamic outlook, and indeed biologists in general at the present time are more interested in the function of living matter than in its structure. Physiologists and biochemists are concerned essentially with changes in the organism as it reacts to changes in its environment."

Another statement in the introductory chapter deserves quoting:

"At one time the organic basis for a patient's symptoms could be established only at the post-mortem examination. The trend in modern medicine and surgery, however, is to study the living patient more and more intensely in order to understand not only his symptoms but the way in which normal physiological and biochemical processes have broken down, for disease is coming increasingly to be thought of as a disordered physiology in which the compensatory mechanisms have been overstrained."

Chapters II to VIII describe the essential present-day information concerning the basic chemical structure of the body: Carbohydrates, lipids, the proteins, nucleic acids and nucleoproteins, enzymes, water, and minerals. Chapters IX to XXI, XXV, and XXXII to XXXIV, inclusive are devoted to foods and vitamins, transport, digestion, absorption and metabolism of foods and respiration and biological oxidations and reductions. The remaining portions of the book are devoted to circulation, excretion, locomotion, sensation and reflex centers, functions of different parts of the central and autonomic nervous systems, the endocrine glands, reproduction, heredity, growth and senility. The text is profusely illustrated with tables, charts, drawings, photographs and photomicrographs. It is remarkable how much important information is to be found in this relatively small volume and how successfully the material has been organized and presented, not only for teaching those who approach the subject for the first time, but also for those who would use the book for reference. It is well indexed.

* * *

PHARMACOLOGY. By Michael G. Mulinos, M.D., A.B., A.M., Ph.D., Associate Professor of Physiology and Pharmacology, New York Medical College. Oxford University Press, New York, 1951. 484 pages. $5.00.

This book is unique in the field of pharmacology in that it is written in outline form rather than as straight textual matter. This no doubt makes for ease in finding the particular information for which the busy practitioner is looking, but for the medical student approaching the subject for the first time it seems scarcely good pedagogy. The author also makes the same mistake so many other textbook writers make, especially those writing in the field of pharmacology; he has introduced the subject by giving a long list of definitions, dosage rules, principles of administration, general principles of pharmacology and classification of drugs before the student has learned any of the properties of drugs which would make it possible for him to comprehend the principles. Such an approach requires rote memory on the part of the student. For those who approve this style of teaching this is the best "small" book in the American market. There are however actually 466 pages of text outline and tabular material, and the book is therefore small only in comparison with such encyclopedic works as Sollmann's "Manual of Pharmacology" or Goodman and Gillman's "Pharmacological Basis of Therapeutics."

The reviewer has read this book with mixed admiration and disappointment. There are many more practical points concerning uses of drugs than are found in the larger treatises but it is difficult to find an analytical or critical evaluation of a drug. The book is purely descriptive. There are excellent tables for orientation and comparison of drugs, and if one is looking for a direct statement of site and manner of action, he can quickly find it, but one looks in vain for experimental or clinical evidence for the statements. There is a good selection of toxicological effects but little attention to site and manner of action of poisons.

The author gives more detail for the administration of drugs than is usually found in a textbook of pharmacology but important factors governing administration, such as fate and excretion of drugs, are given inadequate treatment. For example, there is no discussion of carinamide in relation to the excretion of penicillin, and Brodie's excellent work on the metabolism of acetanilid and similar drugs is overlookcd.

Unfortunately, the book was completed before the appearance of the latest edition of the United States Pharmacopeia (U.S.P. XIV) so that new names and official status of many drugs are not included. There has been a failure to bring the bibliography up to date. There are many statements which are not acceptable to most pharmacologists and critical and experienced clinicians, such as that barium chloride is useful in treatment of the Stokes-Adams syndrome, that cyclopropane induces adequate muscular relaxation, and the incomplete statement that the active principles of digitalis "are glycosides, made up of an aglycone possessing the cardiac activity, and a carbohydrate portion called digitoxose." However, the author is to be commended for the statement that "there is no proof that the purified principles of digitalis are superior to the powdered leaf or its tincture, except in the rate of absorption or the route of administration."

* * *

HEART DISEASE — ITS DIAGNOSIS AND TREATMENT. By Emanuel Goldberger, B.S., M.D., Associate Attending Physician, Montefiore Hospital, New York; Lecturer in Medicine, Columbia University. 90 Illustrations. Lea & Febiger, Philadelphia. 1951. 651 pages. $10.00.

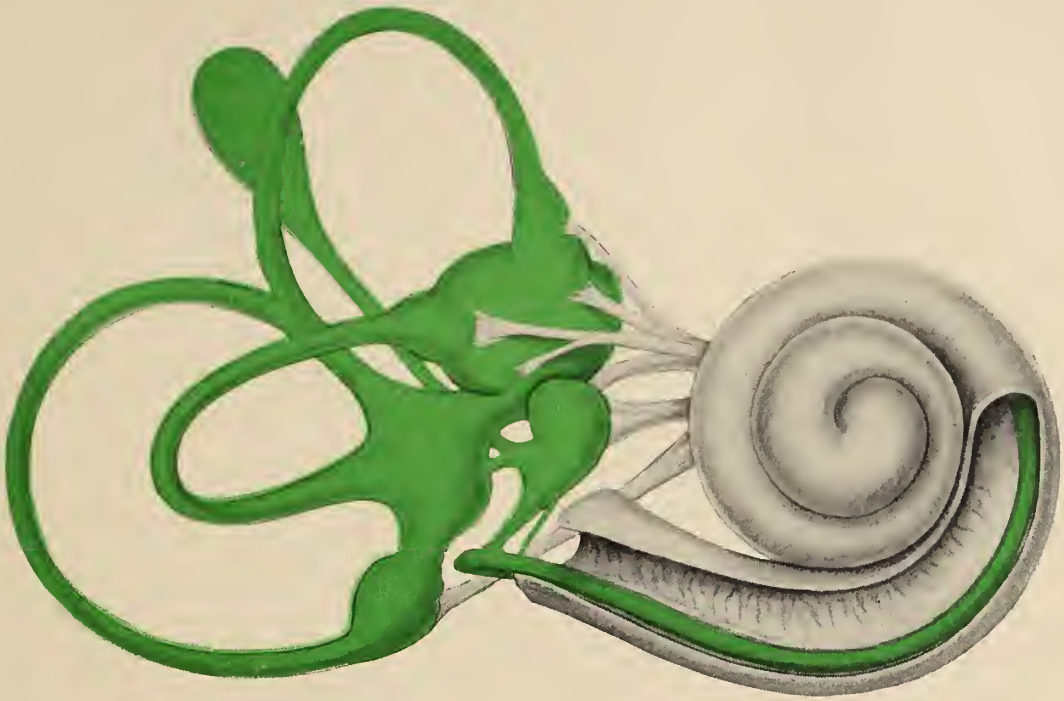
This is a well written and excellently illustrated book on diseases of the heart and great vessels. The diagrams of roentgen-ray films of the heart in the various clinical states are especially well executed for teaching the patterns of chamber enlargements. As would be expected of this author, electrocardiography is briefly but well presented for each of the clinical states discussed. It is well indexed with an adequate but not massive bibliography including a careful choice of key articles recently published.

The remarkable characteristic of this work is the inclusion of a mass of information with unusual clarity and brevity. There is an avoidance of repetition by cross-references. Brevity has the advantage of making readily accessible the outstanding diagnostic and clinical features of each disease entity with its basic structural and functional abnormalities. However, such restriction of space limits description of the variations that are often observed in many of the clinical conditions covered, most notably rheumatic fever, rheumatic heart disease and myocardial infarction.

The organization of the book separates clinical syndromes from the disease entities, which is generally satisfactory, but results in discussions of angina pectoris and myocardial infarction without developing the concept of borderline states of coronary circulatory insufficiency.

There are excellent and well accepted plans of therapy, including anticoagulant drugs, ACTH, cortisone, quinidine and pronestyl, as applied by the author, which should furnish the practitioner many tools for treatment of cardiac patients. As would be expected, when an author draws liberally from personal experience, there will be conflict between his and other opinions as to the values and dangers of some of these procedures; for example, the uniform use of dicumarol or tromexan in treatment of myocardial infarction. These drugs may not be worth using on mild cases of myocardial infarction, especially where trained technicians are not available.

The book should serve as a valuable source of ready reference for all medical practitioners in the broad field of cardiology, excluding peripheral vascular diseases, and a guide to explore in greater detail those subjects which are only briefly included. Although the author emphasizes the practical aspects of cardiology, such as bedside diagnostic methods and the relation of surgery and pregnancy to the cardiac patient, he also presents briefly the most recent technical developments as exemplified by cardiac catheterization and electrokymography.



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—Tuttle, A. D.: Special Breakdown of Case Histories, presented at the Airlines Medical Directors Association Meeting, New York, N. Y., Aug. 28, 1949.

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BREAST CANCER POTENTIALITY LIKENED TO THAT OF A-BOMB

Cancer of the breast in young women and in pregnant women has potentialities which might be compared "to the physical powers of the atomic bomb," in the opinion of Dr. Edward J. McCormick of Toledo, Ohio.

Dr. McCormick is a member of the board of trustees of the American Medical Association. He served as a United States delegate to the Third World Health Organization meeting in Geneva, Switzerland, a year ago and as a member of a medical mission to Japan in 1949.

Writing on breast cancer in a recent issue of the *Journal of the American Medical Association,* he said pregnancy is a stimulator of cancer of the breast or of the cervix. He reported that the most rapidly fatal cases in his experience have been among the younger patients with active ovaries and pregnancy.

"Examinations of breasts are being conducted by physicians and patients more frequently because of publicity and information reaching the laity," he said. "Biopsies are increasing in most hospitals. Prevention is always superior to attempted cure."

The breast being one of the most accessible parts of the body, examination is simple, he pointed out. In his opinion, biopsy is the only reliable means of establishing the diagnosis. The disease should be recognized early if better results are to be obtained, he stressed.

Dr. McCormick urged more radical treatment of the questionable benign and so-called premalignant conditions. He expressed the opinion that the removal of benign lesions frequently will prevent the development of cancer. He added:

"We have made progress in our attack upon benign and malignant lesions of the breast, but we have a long distance to go. We will have more opportunity of reaching the millenium when we recognize the limitations of our present mode of attack on both the early and late cases."

Dr. McCormick said it is estimated that 12,000 women die each year in the United States from breast cancer, and that about 4 per cent of all female adults acquire the disease.

Age of the patient and type of breast cancer are most important in determining the prospects, he said. Complete removal of the breast and the lymph nodes and fat in the armpit are absolute necessities if cure is to be expected, he added. Breast cancer usually spreads by way of the armpit.

The operation should be followed by expert radiological treatment, he urged. He said x-ray therapy alone was of limited value but all his patients have postoperative treatment because results are improved. "In my experience, mortality following radical breast procedures, when ample blood replacement is used, is practically nil," he said. "I have had but one death among my last 300 patients."

The endocrine field seems to offer much to the research worker and to the breast surgeon, Dr. McCormick said. "There is little doubt in my mind about the possibility of direct relationship between malignant development in certain parts of the male and female anatomy and endocrine activity."

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The A.M.A. Council on Medical Education and Hospitals has made available to physicians and hospitals throughout the country a new service which provides information regarding the availability of appointments to approved residencies.

A list of residencies in approved hospitals in which positions are open will be furnished to physicians on request. These lists, to be revised monthly, will provide information regarding the number of positions available, the name of the chief of service, the stipend paid and the person to whom the application should be made.

Hospitals interested in having their available residency positions listed in this manner will be furnished, on request, a brief form on which the pertinent data regarding the service will be reported. These positions will be included in the monthly lists, as revised, for as long a period as the hospital desires. At the time it originally requests a listing, the hospital will be furnished a number of post card forms which will be returned to the council prior to the 15th of each month, as long as the position remains open. When the hospital discontinues returning this form, the position will be considered filled and it will be removed from subsequent lists.

Hospitals that have residency appointments available should communicate with: Residency Information Service, Council on Medical Education and Hospitals, American Medical Association, 535 North Dearborn Street, Chicago 10, Ill.

Physicians interested in receiving the list of available appointments should write to the same office.

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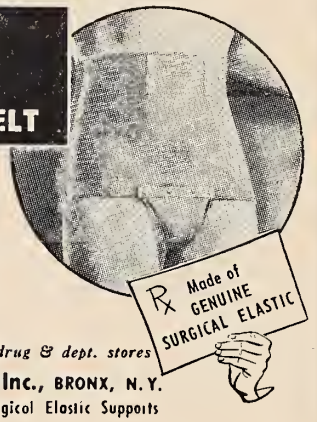

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NERVE SURGERY HELPS PARAPLEGICS IN CONVALESCENT PERIOD

Nerve surgery on some paraplegics in a convalescent stage appears to be justified as a result of experiences at the Van Nuys Veterans Administration Hospital, according to Dr. John D. French, associated with the hospital.

Dr. French, reporting on his observations of 500 paraplegics in a recent issue of the *Journal of the American Medical Association*, explained that at first a paraplegic is under the care of a neurosurgeon. The neurosurgeon evaluates the extent of the injury and does what he can, surgically and otherwise, to facilitate the return of function where damage is not irreversible. Next comes a period of rehabilitation, often long and difficult, during which neurosurgery contributes little. Later, however, he pointed out, rehabilitation may stop short of the ultimate goal for the patient because of new neurosurgical problems which can be helped by a second operation. Seventy-seven of the 500 patients he reported fell into this category and were operated upon because their rehabilitation became static or regressive.

As an illustration, he cited the case of a 30-year-old man who became paralyzed in the lower part of his body as a result of a shell fragment. He said:

"Rehabilitation was never satisfactory because the patient complained of pain in both legs. He was admitted to the hospital three years later, where he

(Continued on Page 64)

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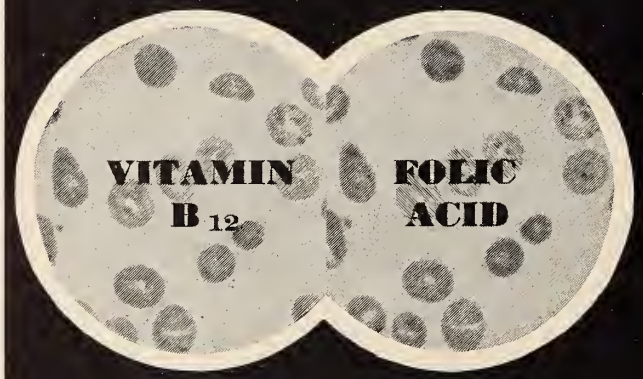

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*LUHBY, A. L., & WHEELER, W. E., "MEGALOBLASTIC ANEMIA OF INFANCY," HEALTH CENTER JOUR., OHIO STATE UNIV., 3, 21, 1949

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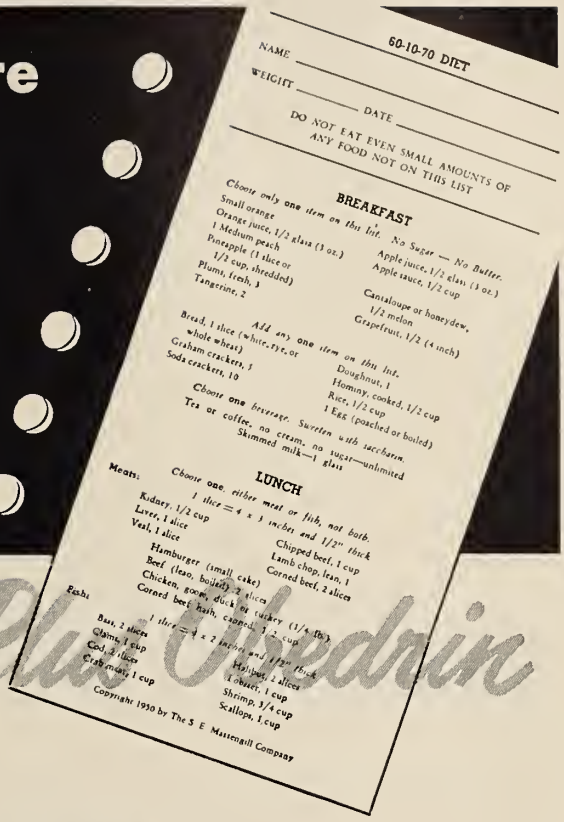

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NERVE SURGERY HELPS PARAPLEGICS IN CONVALESCENT PERIOD

(Continued from Page 58)

made no effort to enter into the usual activities of rehabilitation, apparently being confined by the discomfort. A chordotomy was done two years later after which complete relief of pain was reported. The patient was subsequently discharged from the hospital and now indicates that he leads a normal, comfortable existence."

Because of these and other advances in rehabilitation of paraplegics in recent years, Dr. French said that the feeling of hopelessness that clouded the outlook of these patients has been largely dispelled. They can be taught to talk and walk and can be returned to usefulness, he added.

ISSUES WARNING ABOUT NEW, POISONOUS INSECTICIDES

Anticipating an increase in the use of insecticides this season, the American Medical Association editorially issued a warning about the poisonous nature of these products.

The editorial, carried in a recent issue of the *Journal of the American Medical Association*, pointed specifically to two of the newer substances—aldrin and dieldrin. These, as well as the other insecticides, are expected to be used widely, especially in the southern and cotton-raising areas, it said.

Aldrin and dieldrin are available in either powdered form or as emulsified concentrates. The powdered products can be absorbed by inhalation,

(Continued on Page 65)

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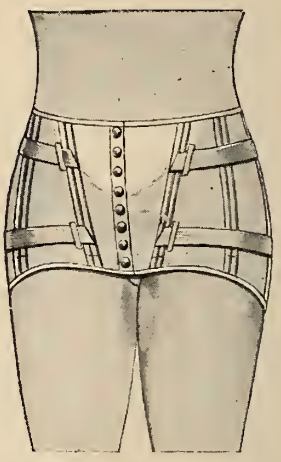

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ISSUES WARNING ABOUT NEW, POISONOUS INSECTICIDES

(Continued from Page 64)

through the skin or by swallowing. The concentrates or emulsions also are readily absorbed by the body because of the solvents used in their preparation.

"The danger of accidental poisoning by inhalation is unknown," the editorial added. "but intravenous toxicity, which is possibly the closest measure of potential danger from respiratory exposure, is three to six times that of DDT."

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It was advised that if the skin has been contaminated with the chemicals, the area should be washed thoroughly with soap and water. Contaminated clothing should be removed immediately and washed thoroughly.

At present there is no universally accepted method of treatment for this type of poisoning. Treatment depends to some extent on the symptoms and could include barbiturate therapy, dextrose, amino acids and oxygen.

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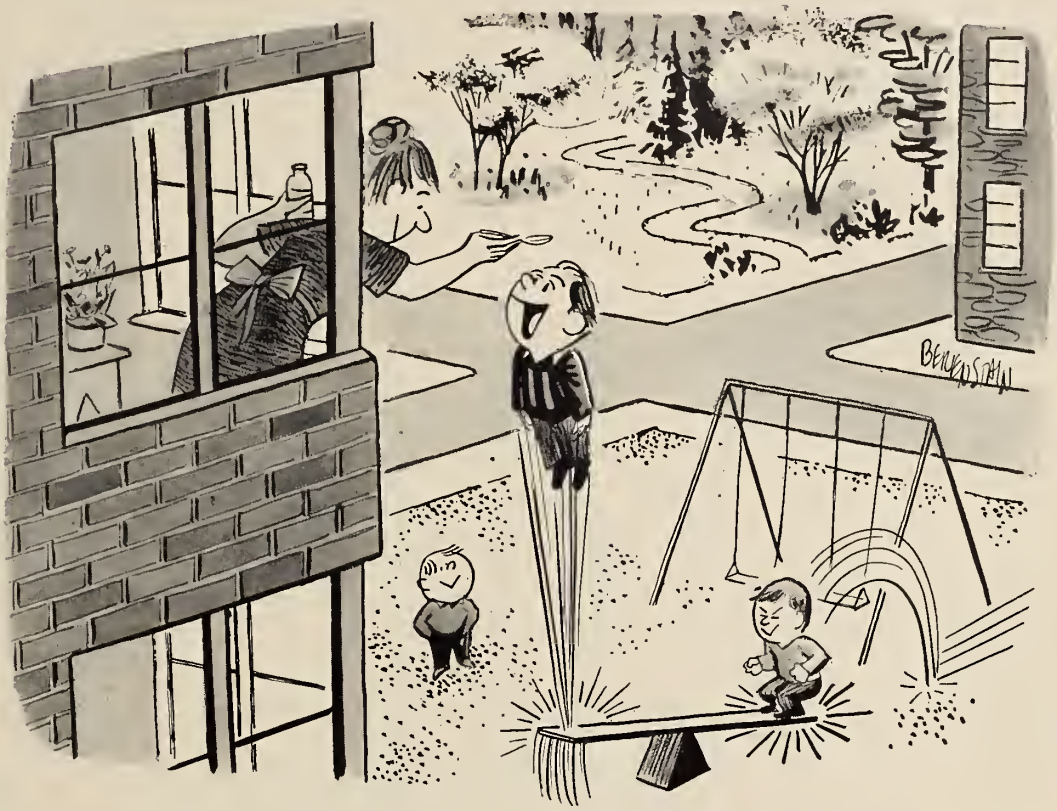

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BOOKS RECEIVED

AGRICULTURAL LABOR IN THE SAN JOAQUIN VALLEY—Final Report and Recommendations. The Governor's Committee to Survey the Agricultural Labor Resources of the San Joaquin Valley. Sacramento, Calif. 1951. 405 pages.

AMERICAN ILLUSTRATED MEDICAL DICTIONARY—W. A. Newman Dorland, A.M., M.D., F.A.C.S. 22nd Edition. 1736 pages, with 720 illustrations, including 48 plates. W. B. Saunders Company, Philadelphia, 1951. $10.00.

ANNUAL REVIEW OF MEDICINE—1951. Windsor C. Cutting, Editor, Stanford University School of Medicine, and Henry W. Newman, Associate Editor, Stanford University School of Medicine. Volume 2. Annual Reviews, Inc., Stanford, Calif. 1951. $6.00.

BENDER-GESTALT TEST, THE—Quantification and Validity for Adults. Gerald R. Pascal, Ph.D., Research Psychologist, Western Psychiatric Institute and Clinic; Associate Professor of Psychology, University of Pittsburgh; and Barbara J. Suttell, M.S., Associate Research Psychologist, Western Psychiatric Institute and Clinic. Grune and Stratton, New York, 1951. 274 pages. $6.50.

CHEST X-RAY DIAGNOSIS. Max Ritvo, M.D., Assistant Professor of Radiology, Harvard Medical School; Instructor in Radiology, Tufts Medical School; Roentgenologist-in-Chief and Director, Department of Radiology, Boston City Hospital. 615 illustrations on 418 Engravings and a Colored Plate. Lea & Febiger, Philadelphia. 1951. 558 pages. $15.00.

CLINICAL LABORATORY METHODS—Fourth Edition. W. E. Bray, B.A., M.D., Professor of Clinical Pathology, University of Virginia, Director of Clinical Laboratories, University of Virginia Hospital. 119 test illustrations, and 18 color plates, 614 pages. The C. V. Mosby Company, St. Louis, 1951. $7.25.

CLINICAL TROPICAL MEDICINE. R. B. H. Gradwohl, M.D., Editor-in-Chief; Luis Benitez Soto, M.D., and Oscar Felsenfeld, M.D., Editors. 473 illustrations and 6 color plates. The C. V. Mosby Company, St. Louis, 1951. 1627 pages. $22.50.

GENETICS IN OPHTHALMOLOGY. Arnold Sorsby, Research Professor in Ophthalmology, Royal College of Surgeons and Royal Eye Hospital, London. The C. V. Mosby Company, St. Louis, 1951. 251 pages. 9.50.

HANDBOOK OF NUTRITION—A Symposium—Prepared under the auspices of the Council on Foods and Nutrition of the American Medical Association. Second Edition. Published for the American Medical Association. The Blakiston Company, Philadelphia, 1951. 717 pages. $4.50.

INDUSTRIAL HEALTH AND MEDICAL PROGRAMS—Statements, tables, and charts selected and compiled. By Margaret C. Klem, Margaret F. McKiever, and Walter J. Lear, M.D. Public Health Service Publication No. 15. Federal Security Agency, Public Health Service, Division of Industrial Hygiene, Washington, D. C., September, 1950. 397 pages. $1.00—Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.

INTEGRATION OF PSYCHIATRY AND MEDICINE, THE—An Orientation for Physicians. William B. Terhune, M.D., Medical Director, Silver Hill Foundation, New Canaan, Connecticut; Associate Clinical Professor of Psychiatry, Yale University. Grune & Stratton, New York, 1951. 177 pages. $2.75.

INTRODUCTION TO MODERN PSYCHOLOGY, AN—O. L. Zangwill. 227 pages. The Philosophical Library, New York, 1951. $3.75.

MEDICAL TREATMENT—Principles and Their Application. Edited by Geoffrey Evans, M.D., F.R.C.P., Consulting Physician, St. Bartholomew's Hospital. The C. V. Mosby Company, St. Louis, 1951. 1398 pages of text and 66 pages of index. $20.00.

PRINCIPLES AND PRACTICE OF OBSTETRICS—10th Edition. J. P. Greenhill, M.D., Attending Obstetrician and Gynecologist, The Michael Reese Hospital; Obstetrician and Gynecologist, Associate Staff, The Chicago Lying-In Hospital; Professor of Gynecology, Cook County Graduate School of Medicine (Originally by Joseph B. DeLee). 1140 illustrations, 194 in Color. W. B. Saunders Company, Philadelphia, 1951. 1020 pages. $12.00

HOSTILE MATERNAL RELATIONSHIP BLAMED FOR SOME CHILD ECZEMA

Some cases of eczema in young children can be traced to a hostile mother-child relationship, according to a dermatologist of Vancouver, B. C.

Dr. Donald H. Williams, writing in a recent issue of the A.M.A. *Archives of Dermatology and Syphilology*, published by the American Medical Association, reports on his study of 53 children with allergic eczema. Maternal rejection, he said, was a common observation in each of the children—that is, "rejection by the one human being who was closest and on whom he was most dependent, the mother."

The children—between the ages of 13 months and 12 years—had chronic eczema involving mainly the arms, legs and face. In most instances the rash first became evident during the year following birth.

For purposes of comparative study, Dr. Williams divided the children into two groups. In the first group, 33 in number, emphasis was put on improvement of the mother-child relationship. In the second or control group of 20 children the emphasis was on treating the rash itself.

Dr. Williams reported these results at the end of a 24-month period:

Fifteen (45 per cent) of the children in the group with emphasis on management of the mother-child relationship were symptom-free. In the control group only two (10 per cent) had clearing. The children in the first group who became symptom-free did so in the seven months after starting treatment, 11 of them having clearing in three months. In the control group the children who became symptom-free did not have clearing until the 15th and 18th month, respectively.

Three of the children in the first group had no change and four in the control group had no improvement. Fifteen were improved in the first group and 14 in the control group.

He explained:

"Of the three children in the group in which maternal rejection was emphasized who were unimproved after 24 months, two lived in disturbed homes with irreconcilable tension between the parents and in the third instance the mother was very hostile to the idea that she might unwittingly be playing a role in the child's distress and insisted that the child was allergic to foods."

The program of instruction to the mothers of the children in the first group, Dr. Williams said, consisted of discussions as to the basic emotional needs of a child, the effect on the child if these needs were not provided, and the means of providing them.

The mothers were told that a mother's love is expressed by tender acts and words toward the child which satisfy its basic emotional need.

"Withdrawal of tender, expressed maternal affection from the atopic child is associated with anxiety or distress which exhibits itself in the form of the characteristic itching of eczema and as resistive, willful hostility toward the mother," he said.

Some mothers, he explained, do not appear to have the ability to express affection spontaneously to any great degree. It is. therefore, essential for them to cultivate the behavior of affection toward their children, he added.

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REPORT SHOWS THOROUGH COOKING OF PORK CUTS DOWN DISEASE

Thorough cooking of fresh pork can help to reduce materially the incidence of trichinosis, an infection from diseased pork, it was shown in a report recently made public by Dr. Rodney R. Beard of San Francisco.

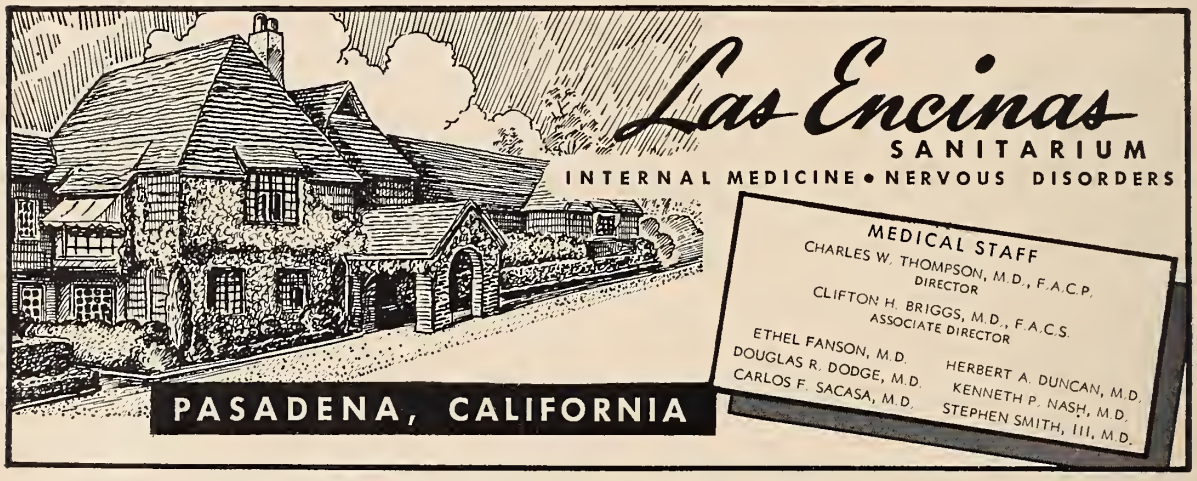
Dr. Beard, writing in a recent issue of the *Journal of the American Medical Association*, credited that as one of the factors in an apparent two-thirds reduction in the incidence of trichinosis in San Francisco since 1936.

Trichinosis is caused by Trichinella spiralis worms which sometimes are found in pork. The worms lay eggs in the human intestinal tract. The embryos work their way into muscles, especially the diaphragm, where they develop. Diarrhea, nausea, colic and fever are the usual early symptoms of the disease, followed later by stiffness, pain, swelling of the muscles, fever, sweating and insomnia.

Dr. Beard cited a 1936 study in San Francisco of a random sampling of 200 human diaphragms taken at autopsy. Trichinosis worms were found in 24 per cent of the organs. A more recent study of 161 diaphragms, also a random sampling, showed only 8 per cent were infected—a decrease of two thirds.

Three factors were listed by Dr. Beard as possible

(Continued on Page 78)



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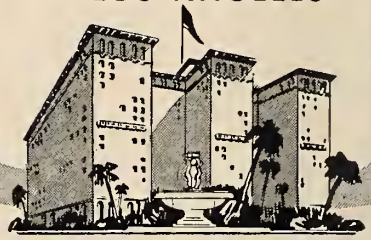

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REPORT SHOWS THOROUGH COOKING OF PORK CUTS DOWN DISEASE

(Continued from Page 74)

agents responsible for the decrease.

He first pointed out that federal, state and local regulations now assure adequate processing of pork products intended to be eaten without cooking. In San Francisco, for example, stringently enforced rules by the local Department of Public Health provide for adequate salting and drying of Italian style salami, an uncooked product, or possible prior killing of trichinae by freezing.

Another factor he mentioned was the reduction in the proportion of pork from garbage-fed hogs. Wartime scarcity of labor, difficulties of transportation and other factors, he explained, made feeding garbage to hogs relatively unprofitable and many local establishments of this kind went out of business. He cited a Department of Agriculture report showing widespread reduction of infections in hogs. From 1934 to 1939 the infection rate was 3.32 per cent as compared with the 0.81 per cent in a recent study.

The third factor was the education of the public as to the necessity of cooking pork thoroughly, he said.

"The possibility of obtaining meat from an occasional heavily infected hog still remains and will remain despite the application of any reasonably practical control measures. The risk of death and of severe disability will, therefore, still persist, but this risk can be reduced to nothing if people will insist on the thorough cooking of fresh pork."

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a. close check on the patient — repeated visits and blood counts — prescriptions should be non-renewable
b. no Mesantoin if original white blood count is below 4000
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A.M.A. SECRETARY'S LETTER

The Council of the World Medical Association held one of its best meetings in Geneva recently, with the discussions covering a wide range of subjects.

Dr. Louis H. Bauer, chairman of the A.M.A. Board of Trustees and Secretary General of the World Medical Association, said one of the highlights of the five-day session was a meeting with representatives of the World Health Organization. For two days there was an informal exchange of views on important problems of mutual interest.

The topics covered by the WMA-WHO discussions included the possibility of holding an international conference on questions of professional and technical education. The purpose of the conference, planned for either 1952 or 1953, would be to stimulate the improvement of standards of training for medical and related personnel. This is a problem which both organizations consider essential in view of the urgent needs of underdeveloped regions for larger numbers of health personnel.

Other topics discussed included (1) measures to promote the free flow of essential medical supplies to countries unable to obtain them at present, and difficulties caused by shortages resulting from the present world situation; (2) assistance to be given to WHO by the WMA in the selection of suitable experts for work in various fields; (3) exchange of information and documentation on subjects of common interest, and contributions by each organization to publications of the other; (4) cooperation of the WMA in assuring the widest possible adoption of international non-proprietary names recommended by WHO for drugs and pharmaceutical products with due recognition of recommendations of the discoverers of the products; (5) assistance of WHO, through its various publications, in making known the "International Code of Medical Ethics" adopted by the WMA, and (6) representation of the WMA in regional conferences of WHO.

Besides Dr. Bauer, the WMA was represented in the discussions with WHO by Dr. Elmer L. Henderson, president of the American Medical Association and also president of the WMA; Dr. Dag Knutson of Sweden, president-elect of the WMA; Dr. Pierre Glorieux of Belgium, vice-chairman of the WMA council, and Dr. Leon Gerin-Lajoie of Canada, assistant to the chairman of the WMA council.

One of the most important projects discussed by the WMA council during its meetings was the possibility of setting up a World Conference on Undergraduate Medical Education.

In a lengthy report prepared by Dr. J. A. Pridham of England, chairman of the committee on medical education, it was pointed out that such a conference should be organized and sponsored by the WMA with the cooperation of other interested bodies.

"The aim should be to assemble a body of experts and other people with authority to debate and, if possible, come to conclusions on important aspects of medical education," the report said, adding: "The conclusions reached by such a responsible body of

(Continued on Page 14)

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*Hamblen, E. C.: North Carolina M. J. **7**:533 (Oct.) 1946

A.M.A. SECRETARY'S LETTER

(Continued from Page 10)

experts from the different countries of the world would have a profound and useful effect on medicine."

The conference would endeavor to find answers to such questions as: What is the aim of undergraduate medical education?; what should be the requirements for entry into medical studies?; what should be the general character of the curriculum after entry?

Definite agenda will be drawn up after matters pertaining to finance and other points have been decided upon.

Hospitality at its best was evident everywhere during the WMA council's stay in Geneva. The doctors of that beautiful city extended hands of welcome. Many receptions and dinners were tendered with the arrangements ably handled by Dr. and Mrs. Jean Maystre. He is the representative of the Council of the WMA to WHO, ILO and the Red Cross bodies. One Sunday, Dr. Otto Leuch of Zurich, Switzerland, treasurer of the WMA, "shepherded" council members on a train trip to nearby Berne, one of the loveliest medieval cities of Europe. On arrival, the doctors were met at the station by a group of Swiss physicians. The party was taken on bus tours of the beautiful Alps country. The activities climaxed with a banquet at the fashionable Bellevue Palace, the leading hotel of the Swiss capi-

(Continued on Page 18)

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A.M.A. SECRETARY'S LETTER

(Continued from Page 14)

tal. Dr. Henderson spoke on "Freedom of Medical Practice."

On the day that council members were leaving for their homes, many doctors from the states arrived for the opening of the WHO Assembly in the Palace of Nations in Geneva. They included Dr. Richard L. Meiling, chairman of the Armed Forces Policy Council; Dr. Leonard Scheele, Surgeon General of the U. S. Public Health Service, and chief delegate to the WHO; and Dr. Henry B. Mulholland, of Charlottesville, Va., a members of the A.M.A. Council on Medical Service and a member of the A.M.A. House of Delegates. Dr. Mulholland planned to be in Geneva a month, serving as an adviser to the United States delegation. Another adviser was Dr. Malcolm T. MacEachern, director of professional relations, American Hospital Association.

Dr. Henderson and Dr. R. L. Sensenich, a member of the WMA council and Past President of the A.M.A., attended the opening session of the WHO and the two then departed on a mission for the U. S. Air Force.

Dr. Bauer stayed on in Geneva for several days to attend some of the WHO sessions.

Working very hard for weeks prior to the WHO Assembly opening was Dr. Joseph A. Bell of the

(Continued on Page 22)

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A.M.A. SECRETARY'S LETTER

(Continued from Page 18)

National Institute of Health of Bethesda, Md. He was in Geneva as chairman of an eight-man delegation to the special committee on international sanitary regulations. He and his staff worked day and night to formulate such regulations, affecting all countries, for presentation to the WHO Assembly. Their project covered smallpox vaccination of travelers, the setting up of a commission to supervise the regulations and keep them up to date scientifically, and the establishment of ways and means of obtaining weekly reports on dangerous diseases from all the countries of the world. Dr. Bell's delegation was concerned with only one primary objective: To establish security for all nations against such epidemic diseases as plague, cholera, smallpox, typhus and yellow fever with a minimum of restrictions to international travel.

Prior to the council meeting, an informal conference was held by officials of WMA, WHO, the International Committee of the Red Cross, the League of Red Cross Societies and the International Council of Nurses on problems of mutual interest.

Cooperative League Builds Defense Fund. The Cooperative League of the U. S. A., with offices in Chicago, has organized what it calls a "People's Defense Fund."

A recent league publication said that "years ago, neither Group Health Association doctors in Washington, D. C., nor their patients were allowed to use District of Columbia hospitals. An anti-trust suit changed all that. . . . Today the Medical Society of the District of Columbia has recognized fully and officially Group Health Association. . . .

"Elsewhere in the nation the situation is not so encouraging. In state after state consumers of medical care are up in arms in defense of their right to associate themselves voluntarily with doctors to solve pressing problems of health care.

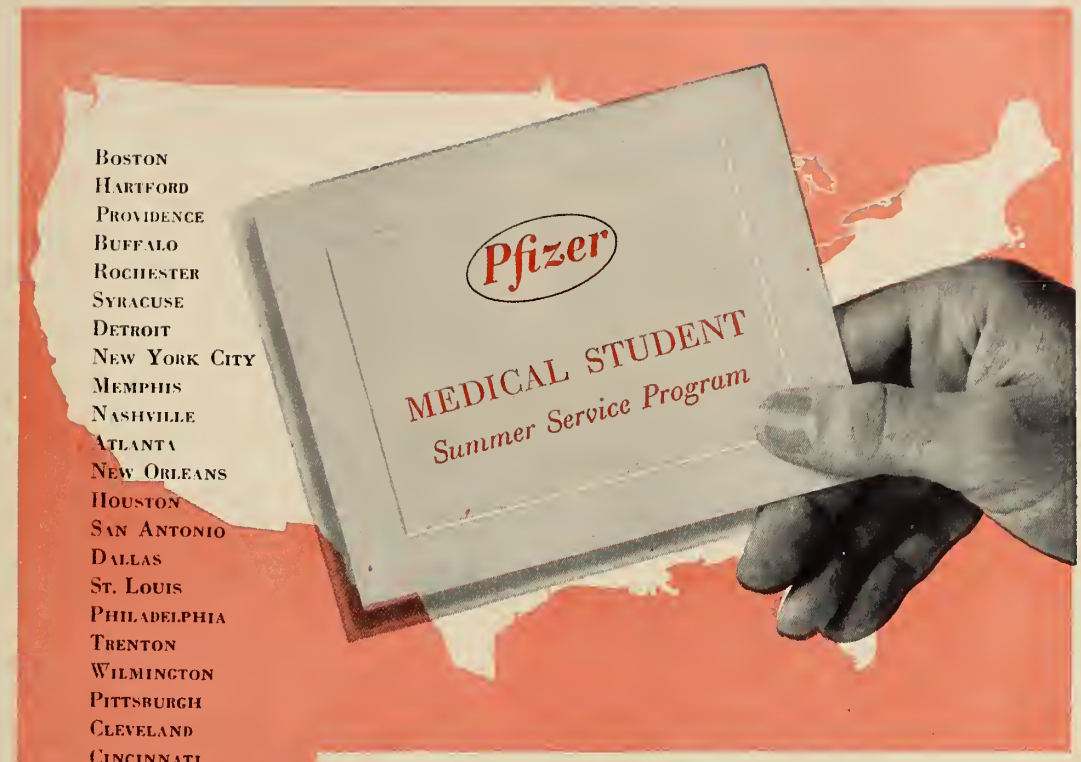
"That is why the board of directors of the Cooperative Health Federation of America has launched a People's Defense Fund now. There will be no overhead expense. . . .

"CHFA earnestly solicits fund contributions from all individuals and organizations who really believe in the right of people and their doctors to use the very voluntary methods of solving their health problems to which the A.M.A. gives lip-service."

Wyeth Movie Serves Medical Profession. Wyeth Incorporated of Philadelphia is initiating a new service to the medical profession. It has just released its second issue of "Tele-Clinic" across the nation.

"Tele-Clinic" No. II, previewed at Chicago's Palmer House last week, is a sound motion picture report featuring abstracts of scientific papers presented at the San Francisco meeting of the American Academy of General Practice. The production is a 35-minute, 16-mm., black and white film which spotlights and reviews the important conferences and business sessions of the academy's four-day assembly. Fifty-five prints will be made available to medical societies, hospitals, nurses' groups and other

(Continued on Page 26)



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At the same time they have the invaluable opportunity of acquainting themselves with current clinical practices of leading general practitioners, specialists, teaching institutions and other professional groups.

This new Pfizer activity will supplement other Pfizer services such as the Antibiotics Newsletter, now being prepared and distributed semi-monthly by the Medical Service Department.

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A.M.A. SECRETARY'S LETTER

(Continued from Page 22)

medical organizations by Wyeth as a service to the profession.

The company's "Tele-Clinic" was released last November and featured proceedings of the Fourth General Assembly of the World Medical Association. Since that time it has been seen by more than 30,000 doctors, including the A.M.A. House of Delegates.

President Harry S. Howard of Wyeth said his firm has undertaken the broad medical educational program in order that medical people who are unable to attend the many important professional meetings far distant from their practices may hear for themselves major medical developments in their home towns. Some doctors, he explained, find themselves hard-pressed to travel great distances for scientific meetings. Through the new program these doctors will be able to hear abstracts of important scientific papers directly from the physician who appeared at the medical session.

Urological Association Upholds A.M.A. Stand. Dr. Charles H. deT. Shivers, secretary of the American Urological Association, mailed me a copy of a

(Continued on Page 32)

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A.M.A. SECRETARY'S LETTER

(Continued from Page 26)

very fine resolution adopted by that entire organization at its recent Chicago convention, upholding the A.M.A. in its forthright stand against socialized medicine and socialism generally.

The resolution said that the American Urological Association "endorses all activities of the American Medical Association in preserving America for Americans, in continuing scientific advances and making such advances available equitably to all for the further improvement of mankind."

The resolution pointed out further that "the socialization of medicine and the socialist state in other countries have resulted in a deterioration of medical care and a lowering in the standards of health."

Copies of the resolution were sent to the entire membership of the American Urological Association for "the purpose of encouraging each individual member to continue to oppose vigorously any and all efforts toward the socialization of medicine or the expansion of the socialist state, whether such efforts are federal, state or local."

Dr. Elmer Hess, Erie, Pa., a member of the A.M.A. House of Delegates and vice-chairman of the A.M.A. Council on Medical Service, was installed as president of the American Urological Association at the Chicago meeting.

Contributions Are Tax Exempt. The American Medical Association has been informed by the Commissioner of Internal Revenue in Washington that doctors' contributions to the American Medical Education Foundation are tax exempt.

(Continued on Page 33)

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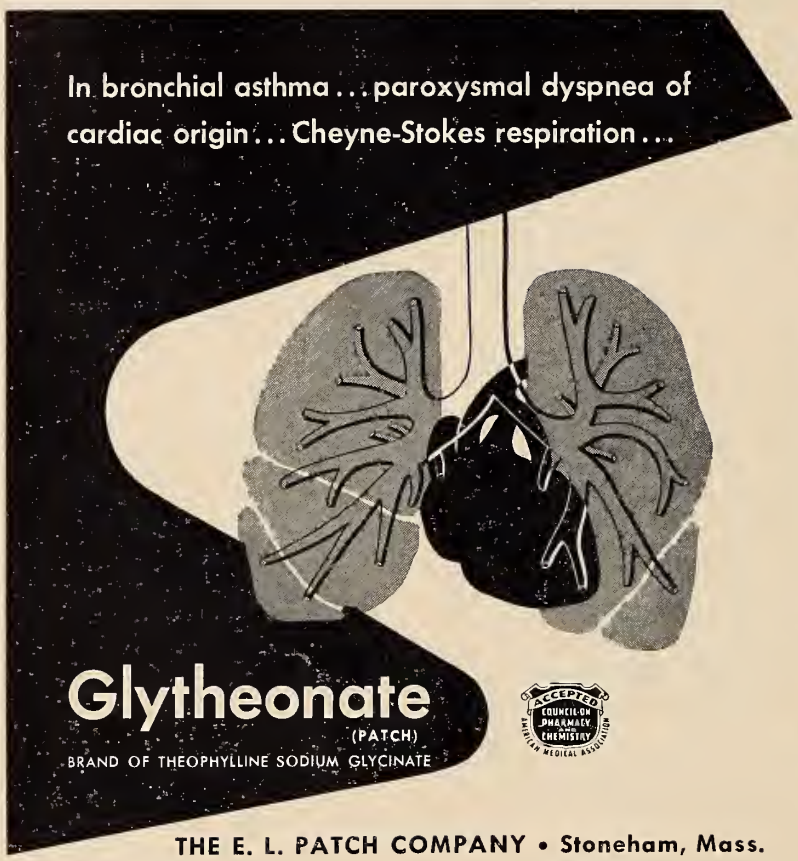

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*Council on Pharmacy & Chemistry: New and Nonofficial Remedies, 1950, Philadelphia, J. B. Lippincott Company, 1950, p. 285.

A.M.A. SECRETARY'S LETTER

(Continued from Page 32)

In a letter to T. V. McDavitt, Deputy Commissioner E. I. McLarney said that "contributions, payments of which are made to you during the year 1951, are deductible by the donors in computing their taxable net income. . . ."

The letter said further that "bequests, legacies, devises, or transfers, to or for your use during the year 1951 are deductible in computing the value of the net estate of a decedent for estate tax purposes in the manner and to the extent provided by the Internal Revenue Code. . . . Gifts of property to you during the year 1951 are deductible in computing net gifts for gift tax purposes."

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The nutrient contribution of three servings of Ovaltine in milk is defined in the appended table.

1. Jeans, P. C.: Feeding of Healthy Infants and Children, J.A.M.A. *142*:806 (Mar. 18) 1950.

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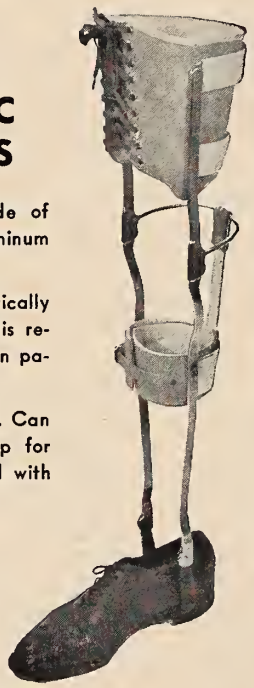

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EPILEPSY NEED NOT BE HANDICAP, SAYS NERVE DOCTOR

Epilepsy in most instances should not interfere with the normal activity of individuals suffering from that condition, in the opinion of Dr. Lewis J. Pollock of Chicago, a nerve specialist.

In most cases the attacks are controllable, Dr. Pollock emphasized, writing in a recent issue of *Today's Health*, published by the American Medical Association. He summed up "What is epilepsy?" in this way:

"It is not related to feeble-mindedness; it is not, nor does it lead to insanity; it is not associated with, nor does it lead to delinquency, vice, crime or mental deterioration. In most instances, it should not interfere with good health, education, technical or professional training, or commercial, manufacturing or professional pursuits. It is compatible with courtship, marriage, bearing and rearing children, the pursuit of happiness and normal social life and good citizenship. It bears no shame. It deserves only that amount of compassion freely given to those who have some other illness."

Epilepsy, meaning "to be seized," he said, may be the result of injury or disease of the brain or of certain bodily disease. In many cases, however, the cause is not known, he said.

Dr. Pollock described two main types of seizures. Grand mal or big attack, he said, is easily identified as a fit by any layman. Petit mal or little attack was described as a momentary lapse of consciousness, a short black-out or only a peculiar feeling. Often the person automatically continues what he has been doing, or he stops speaking temporarily, and may stare or smack his lips, he said. Repeated periods of excitement, rage or confusion, sleep-like states, or sudden twitching of the shoulders, as if startled, may constitute an attack.

"It is especially necessary," he continued, "to recognize recurrent attacks in infancy and young childhood, which may indicate the beginning of the disorder or call attention to the possibility of its later development."

Although infantile convulsions, such as occur with fever, upset stomach or cutting of teeth, are not forerunners of later epilepsy, he said, repeated convulsions are evidence of an increased chance of late epilepsy.

"Convulsions occurring on one side of the body after the fourth year and generalized convulsions lasting one and a half hours and followed by several hours of confusion or sluggishness are especially significant for the later development of epilepsy. Head-banging and breath-holding to the point of blueness of the skin and loss of consciousness should be reported to a physician as soon as they are observed. Repeated dizzy attacks of a very short duration and screaming followed by limpness likewise have a serious import."

He pointed out that there is no miracle drug or surgical procedure that can cure epilepsy at present, but that the attacks can be controlled in at least 70 per cent of all cases not due to organic disease.

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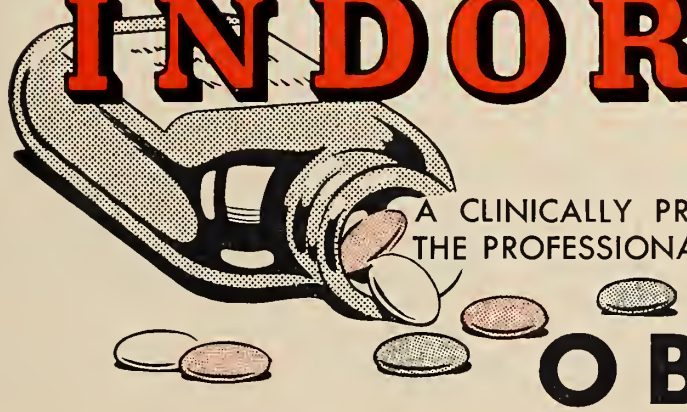

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Thyroid, U. S. P.	½ gr.	½ gr.	½ gr.
Atropine Sulphate	1/360 gr.	1/360 gr.	.....
Aloin	¼ gr.	.....	.....
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REPORTS BETTER RESULTS FROM INTRAVENOUS USE OF ACTH

Intravenous injections of ACTH in greatly reduced doses produce equally good or even better results than larger doses of the drug injected intramuscularly, according to a study made at the Veterans Administration Hospital, Long Beach.

A joint report on the intravenous use of the hormone was made in a recent issue of the *Journal of the American Medical Association* by Drs. William Mandel, Michael J. Singer, H. Rudolph Gudmundson, Lester Meister and Frederick W. S. Modern.

The doses used were only one-tenth to one-twentieth of those previously used, the doctors said. Commenting on the results of the treatment of 25 patients, all are responding "adequately," they said:

"No patients were refractory to the hormone when given by this method. There were no patients who relapsed while being treated with adequate doses. There were no patients who were refractory on subsequent treatment."

Subsequently, they treated 20 additional patients and the earlier results were confirmed.

The patients were treated for periods of from two to 42 days for a variety of conditions, including rheumatic arthritis and bronchial asthma.

"Ten patients had previously received the drug in intermittent intramuscular injections," the report

(Continued on Page 46)

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When the threat of cardiac failure exists. *Nitranitol with Phenobarbital and Theophylline.* (½ gr. mannitol hexanitrate combined with ¼ gr. Phenobarbital and 1½ grs. Theophylline.)

REPORTS BETTER RESULTS FROM INTRAVENOUS USE OF ACTH

(Continued from Page 42)

said. "In these the response to intravenous infusion of the hormone was usually more prompt and complete. Remissions after cessation of intravenous treatment were generally more prolonged."

The obvious advantage of the intravenous form of administration is its relative economy, they pointed out. However, patients must be followed closely when this method of administration is used, for undesirable side-effects may occur more frequently and with greater rapidity. The absence of refractoriness on the part of patients suggests that this condition may be in part related to the mode of administration, they said.

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The conclusions were based on reports of 886 cases in a nationwide cancer study being carried out

(Continued on Back Advertising Section, Page 54)

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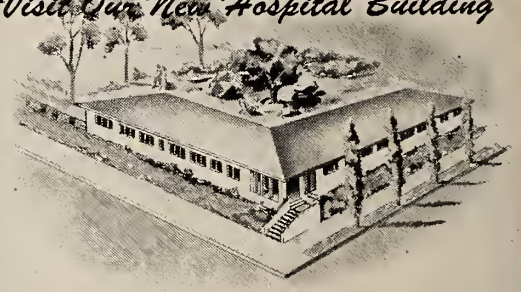

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Psychological Problems of Aging

ALEXANDER SIMON, M.D., *San Francisco*

SUMMARY

The increasing number of older persons in the United States is having far-reaching economic, social, political and psychological effects. Patients over 60 make up more than a fourth of current admissions to California's state mental hospitals. Biological, personal, cultural and economic problems are present in each elderly person and must be considered in the treatment of such individuals. Neurotic reactions are much more frequent that the psychoses, and these may be treated by the same therapeutic tools utilized with younger persons.

Not all the psychoses in the aged group are such as to necessitate mental hospital care. Many of the patients could be cared for in suitable nursing homes. An adequate mental hygiene program, maintenance of physical health, opportunities for work, and the development of hobby and recreation centers may help ward off many of the difficult problems that the aged now present.

IN this country, in the years just ahead, the average age of the population will increase despite the spurt in the birth rate that has occurred since 1941. The trend toward a population heavily weighted with old people is to be a factor of growing importance in many fields. Old age insurance is to become much more important. Taxes to support the aged and to provide security for other groups will rise sharply. A wave of youths has already begun to flood the schools of the country, starting in the lower grades and extending gradually all through the school system, but the really big wave will be that of persons passing beyond the age of 50 and beyond the age of 65 as the years roll by.

Our total population, which was 106,000,000 in 1920, is now about 141,500,000, and is expected to be 162,000,000 in 1975. The middle-aged group, from 30 to 50 in particular, will increase and will carry the burden of supporting more aged than in the past, and about as many younger people. The number of persons 50 years of age and over has almost doubled since 1920, from 16,000,000 to 31,000,000, and will continue to grow rapidly. It is expected to reach 47,000,000 in 1975. The group of persons aged 65 and over is to be one that will attract more and more attention; there are now 10,500,000 people of that age and there are expected to be 17,500,000 within 25 years. As numbers of old people grow, so will their political power, and with it demands for bigger and better annuities and pensions. All in all, the increase in the number of older persons will have far-reaching economic, social, political and psychological effects.

The problem so far as it affects state mental institutions in California is becoming an increasingly serious one. In 1925, 15 per cent of all patients admitted for the first time to state mental hospitals were over 60 years of age. In 1935 the ratio was 18 per cent; in 1945, 28 per cent. The percentage of patients over 60 years of age in the resident population of the state mental hospitals has increased from 24 in 1936 to 34 in 1945. The more urbanized the community, the higher the rate of admissions to mental hospitals for psychoses of the aged. The rate was 30 to 40 per 100,000 population in 1945 in California. Patients over 60 years of age make up more than a fourth of current admissions to California's state mental hospitals (28 per cent were over 60 years of age, 15 per cent were over 70. and

From the Division of Psychiatry, University of California School of Medicine, and The Langley Porter Clinic, Department of Mental Hygiene, State of California.

6 per cent were over 80). There were approximately 12,000 admissions to the California state mental hospitals in 1948, of which over 3,000 were of persons more than 60 years of age. Of the patients over 60 years of age when admitted, 8.4 per cent die within one month of hospitalization, and 40 per cent within one year. Almost 40 per cent of them, however, are ultimately discharged from the hospital, most of them as improved, indicating that the outlook is not necessarily hopeless and that opportunities for rehabilitation exist.[3]

Aging is a universal, continuous and insidious process, beginning with conception and ending with death. What is understood as "old age" or "growing old," in terms of structure and function, may be observed in one person in his earlier years, and in another many years later; or it may manifest itself locally in special organs such as the heart, kidneys, brain, eyes, ears, or skin, in an extremely irregular and variable fashion. Growth and repair, atrophy and deterioration, are constantly in evidence at any age level and differ in intensity and rate from one person to another so that it becomes most important always to consider biological as well as chronological age. Some persons are old and worn out in adolescence, while others may be old in years and still quite active and useful. Age should, therefore, be considered in terms of structural, physiological, behavioral, intellectual, and emotional factors, and only then can judgments be made of true biological age in contrast to chronological age.

In order to understand any individual, one must understand not only the person but the setting in which he lives. Biological, personal and cultural problems, including sociological and economic problems, are present in every case. This is as true of the oldster as it is of the younger person. The emotional problems of the aged person are, like all psychological problems, those of adaptation to a changing functional equilibrium within him as well as a changing attitude to him from his environment. Old age can be a problem period, characterized by more or less frustration, and special problems of adjustment can arise. All components of human behavior undergo modification as the individual grows older, and any of these changes is a potential source of frustration requiring reestablishment of the equilibrium between needs and satisfactions. Just as the aged in general undergo progressive impairment of the regulatory homeostatic mechanisms which enable the body to maintain a fairly constant internal environment in the face of fluctuating external conditions, in the same way the adaptive capacity of the individual to withstand psychological stress becomes impaired and defenses formerly adequate may disintegrate.

BIOLOGICAL FACTORS

With increasing age, a general reduction in strength, skill, and endurance occurs. This usually causes more difficulty in adaptation in men than women, as it is upon such abilities that the economic independence of the man may depend. Involutional changes, which actually begin early in life, are so subtle and insidious in development that they do not generally manifest themselves overtly until the individual is well past 40 years of age. Disability, while usually gradual in development, may come on abruptly after an illness, an injury, a failure in competition, or after rumination over friendly teasing that "he ain't what he used to be." The oldster in any case may react to decreasing abilities by withdrawal and retreat into a state of rationalizing his dysfunction with complaints of fatigue, weakness, digestive and bowel difficulties and physical illness. Preoccupation with body functions is often the result of decreased activity and leads to feelings of ill health which become an unconscious means of gaining sympathy and attention. Complaints of fatigue are prominent and usually are in inverse relationship to prospects of satisfactions of needs. Instead of withdrawal, the oldster may react to feelings of impending disability by aggressive overcompensation to prove to others he is as good as ever. He may try to increase his effort and productivity beyond his capacity to a degree that he exhausts himself, or his verbal repetitions of his prowess and ability may reach the point of annoyance, or he may adopt vigorous physical culture routines to improve his strength.

In a woman it is the decline in youthful appearance and attractiveness which is more important. She places great store on youth, comeliness and fertility, and their passing is a real personal threat. In contrast to the male, she finds an easy rationalization for this threat in the development of physical illness with a variety of physical complaints, since society's attitude is much more indulgent to illness in the female.

Of important sensory functions, hearing and vision are most often affected by aging. With failing hearing and vision, the oldster becomes deprived of a large share of pleasures, diversions and occupations, and as a result he becomes even more isolated from the activities of his social group. Deafness, in particular, may lead to misinterpretations and misunderstandings, the suspicions isolating him further from his friends and family and making it difficult for him to discharge his social obligations or to function adequately at his job.

The fear of death, present in all of us, is understandably exaggerated in the elderly. Anxiety about living may be translated into anxiety over one's physical health and be expressed in terms of physical symptoms. A fear of ill health, and especially of chronic invalidism, may be constantly present in that such eventualities may be a serious threat to limited funds, force one into a position of dependence on others, or seriously hamper one's activities. Physical health and comfort and emotional security are paramount needs at all age levels, but they become even more essential with advancing years. The younger person has greater hope for recovery when ill and correspondingly less concern about disease, but the older person who is more preoccupied with the state of his health in view of the physical de-

terioration of the aging body, may feel the threat of imminent death.

In the past, tradition has demanded that human beings, as they grow older, should become asexual. But to make such a demand of the aging is as unrealistic as it is to make it of children. While there is generally a reduction in potency in the male and of desire in the female, there is great variability in this. The rate of cessation of gonadal secretion at the time of the menopause may have little, if anything, to do with the onset of so-called "nervous" symptoms at this period of life. Anxiety may become more intense, not because of physiological changes, but because youth is being left behind. Women especially may make frantic efforts to maintain a youthful appearance. The aging male may react to waning potency realistically, accepting it, or he may develop exaggerated, aggressive, or passive reactions. His solution may be a passive one in that he attempts to relieve his sexual tensions by indulging in sexual fantasies or masturbation, and, as a result, his former conflicts at adolescence with associated feelings of guilt and anxiety recur. If he attempts a solution by aggressive means, he increases his overt sexual activities to reassure himself of his sexual competence, and to prove to his spouse that he is still an able man he indulges in extramarital adventures, which sometimes prove very embarrassing. Should he fail, there is apt to follow an intensification of feelings of inadequacy and guilt. He may, instead, attempt to solve his problem by a vicarious interest in the sexual problems of others, condemn the younger generation for their "loose morals," and even join in crusades against supposed evidences of modern depravity.

CULTURAL FACTORS

In order to clearly appreciate the problems of our aging population, they must be considered in the cultural setting in which that portion of the population lived and is now living. Cultural changes, while gradual and continuous, are nevertheless slow enough that prevalent attitudes are in many ways different today than they were in the formative years of our present aged group. This is true of our attitudes about the family group. The family is the most important influence in an individual's personality and behavior. Living in an ideal family group provides the source of many satisfactions — physical care for its members, the sex needs of the individual, need for intimate personal contacts. It provides, moreover, emotional and economic security. Father, mother and children all have certain roles to play in this group, and these may seriously be affected by the aging process. The man has a job to do, daily problems to meet, and the responsibilities of a wage-earner; the woman has the care of home and children; and each is carried along by a pressing daily routine. With increasing age a grave readjustment becomes necessary. The children become adult, marry, and leave the home. Time hangs heavily on the hands of a once busy mother. Illness may interfere with the man's ability to hold a job, or the woman's to be a housekeeper; or the death of a marriage partner may force a major readjustment, especially in living arrangements. The oldster then finds it necessary to relocate himself and to step out of a familiar pattern.

Changes in concepts about the family group have produced problems for the aged. The large family unit consisting of three generations, including grandparents, parents, and children, is a thing of the past. Especially in the urban middle class group, the family is not considered normal unless its membership is confined to parents and children. When children grow up and marry they are expected to leave their parents' home, and as a result the older people are left in comparative loneliness. If one of the parents should die, either son or daughter must add an old member to the family group, which is not designed for such an addition; or else the parent continues with separate living arrangements and increased loneliness.

The attitudes of the younger generation regarding their obligations to the aged are changing, and as a result a great deal of ambivalence and conflict develops. The custom of youngsters', before marriage, turning over their earnings to the parents is disappearing. It is undesirable for the young person to continue his home with his parents after marriage. Newer attitudes about child training have taken from old persons the pleasures of guiding their grandchildren. There is a tendency to treat oldsters with patronizing courtesy, but to exclude them more and more from the social life of the younger group.

So far as living arrangements are concerned, the tendency seems to be for the elderly married couple to maintain an independent household, and for the widowed person to accept living with children or relatives, or in an institutional home, or hotel, or boarding house. With lowered income, the elderly couple often find it necessary to leave the old home to which they are sentimentally attached, to relocate themselves, to leave familiar objects and patterns of living for quarters in neighborhoods of socially inferior rank. The oldster's conservatism resists this change, as familiar objects and persons are important to him. The wife may blame the husband for real or fancied lowering of status; children may assume a changed attitude to impoverished parents; and the oldster may react to his changed status with anxiety, resentment, and somatic complaints. For the woman, the death of a spouse involves economic adjustment and change in living arrangements; for the man, the loss of a homemaker; for either, loneliness and loss of emotional security. When an oldster is forced to move into a child's home, the relationship between parent and child may become reversed, so that the adult offspring now has an opportunity to revenge himself for years of submission to a dominating parent. The elderly man loses the prestige he had in his own home; the woman loses control over domestic arrangements. Each loses status

and prestige. The maladjusted elderly person, like the maladjusted adolescent, may feel unwanted, inferior, unattractive, and unnecessary.

When decrease in family income, decrease in the size of the family group, the death of a family partner, or failing health make existing living arrangements of older persons unfeasible, and one is called upon to advise in such a situation, either in the direction of arranging for the individuals to live independently or to live with children or relatives, one must ask: Does sharing a family home, maintaining a home on a modified scale, living with nonrelatives, or living in an institution, offer the greatest possibilities of satisfaction of the physical and emotional needs of the individuals concerned? Living with one's family may provide natural bonds of affection to incorporate the oldster emotionally into the family unit. On the other hand, the housing of three generations under one roof offers many possibilities of conflict and frustration, each of which must be handled adequately if the group is to live harmoniously. While maintaining an independent household provides lesser opportunities for conflict with younger members of the family, and less loss of prestige and status, it still presents problems of loneliness and of obtaining physical care for illness when it is needed. The institutional family has many advantages of group living, companionship, and provisions for medical and nursing care, but there may be frictions and frustrations among the oldsters with which to cope.

MAKING A LIVING

Opportunity for work is the crux of most problems in the economic sphere, and such opportunity is severely curtailed in old age, especially in times of economic depression. Luckily, older workers usually stand a fair chance of keeping their jobs, although they have a poorer chance of getting new ones. In spite of the fact that older people, in general, have greater difficulty in acquiring new occupational skills, especially when these are in conflict with well established habits, they do have certain assets which come with age—greater evenness of performance, less frequency of errors in performing a well established routine, and less tendency to quit their jobs. Where physical vigor is important, the oldster may be at a disadvantage; where judgment and skill are required, he has the advantage.

Motivation is also an important factor. Strong motivation can compensate for loss of ability, so much so that in a given situation an old person may be more efficient in learning than a younger one. On the other hand, because of personality reactions to environmental pressures from without he may adopt an attitude of helplessness and be unable to use what ability he has. Old people are apt to develop feelings of lack of self-confidence and of personal inferiority. In our present industrial society old age brings lowered productive capacity, decreasing income, increasing need for support from children or social agencies, and a relegation to the status of "has been." It is no wonder, then, that loss of economic independence, especially in an already insecure person, contributes to exaggerated reactions of anxiety, tension, depression and helplessness. What is needed are new purposes and motivations at an age when it is most difficult to acquire them.

RETIREMENT

Retirement too often depends on an arbitrary age limit. Abrupt termination of active interests and occupations can have disastrous effects. The retired person misses the externally imposed routine; he loses familiar landmarks and points of reference, and his own sense of personal identity. Retirement is often treated like a graduation ceremony, with dinners, speeches, and tokens of esteem, but with this difference: The young graduate has his life yet to live; the man who is retired feels too often that he is through, that this is in a sense a funeral ceremony. To the fullest extent, collateral interests should be mobilized and revived and, if necessary, even created. Retirement should always be *from* a job *to* some other interest.

PERSONAL FACTORS

There are a certain number of traits which are attributed to the personality of the oldster which occur with varying frequency and intensity, and which are dependent on the psychobiological integration of the individual. Symptoms commonly appearing in the elderly are feelings of inadequacy feelings of rejection, depression and self-pity, hypo chondriasis, anxiety, irritability, boredom, apathy guilt feelings, social withdrawal, rigidity, and conservatism. Many of these traits can be understood at a psychological level in terms of satisfaction or lack of satisfaction of definite psychological needs. If the oldster's need for physical health and comfort is not satisfied, he reacts with discomfort, pain, irritability and tearfulness; if his need for affection and love is not satisfied, he reacts with feelings of loneliness, rejection and depression; if his need for recognition is not gratified, he reacts with feelings of inferiority and worthlessness; if his need for expression is thwarted, he reacts with restlessness or apathy; and if his need for emotional security is not met, he has symptoms of anxiety.

When an elderly person becomes overly assertive and domineering, it may be a compensatory reaction for feelings of inadequacy, inferiority and insecurity engendered by physical and psychological decline. The feelings of depression may arise from increasing isolation and loneliness as friends and relatives dies, and these added to a loss of self-respect and self-esteem, which follows decreasing status and prestige, enhance the depressive feelings.

NEUROTIC REACTIONS—PROPHYLAXIS AND TREATMENT

Emotional conflicts are as apt to occur in the oldster as they are in the young. He is not in a state of inertia, and as he realizes that lifelong wishes are not attained, old unresolved conflicts may reappear

in the form of passive or aggressive reactions. The patterns of his neurotic reactions are dependent on his premorbid personality and the character of his interpersonal relationships with those about him. Psychological tensions are apt to be translated into somatic tensions, which become attached to specific body organs and provide apparently tangible complaints with which to deal. Illness becomes a means of gaining sympathy and attention, a means of restoring at least some lost security and sometimes provides a method of aggressive domination of the situation by arousing guilt in the child. Anxiety reactions are often repetitions of similar earlier patterns, or they may arise from guilt over sexual fantasies, or from feelings of insecurity, from loss of occupation, loss of prestige, or from being forced into a position of dependency on one's children. As older people become more and more isolated, they may become more and more sensitive to slights, and this may become exaggerated enough to be considered a paranoid reaction. Fatigue complaints are frequent and are in inverse relationship to motivation and prospects of gratification. What is needed in such circumstances is not only rest but a wholesome balance between rest, recreation and work.

The neurotic reactions of the aged are much more frequent than the deteriorative psychoses and are not necessarily signs of organic decay. Syndromes of hypochondriasis, neurasthenic-like reactions, anxiety states, depressions, paranoid reactions and sexually deviate behavior may develop. The same therapeutic tools may be used with the aged as with the younger person.

The level of adjustment made by old people is to some extent the product of their immediate environment and the attitudes to them of the surrounding society, but even more it is the result of the kinds of people they were. This means that the most effective ways to assist the aged are those undertaken before they grow old. Maintaining health, economic security, and the building of a mature flexible character structure are the necessities by which the problems of old age are warded off. Adequate food, lodging, and medical care are necessary for security, but if living is to be adequate in later maturity, an appropriate set of attitudes and a wholesome elastic way of life must be set in early years if later ones are to be contented and satisfying. It is necessary to make preparation early enough that no abrupt disruption of habit patterns occurs. One who does that is able to maintain some degree of personal independence and find sources of gratification in even curtailed activity to such a degree that he maintains status and prestige in his own eyes as well as in those of others.

The oldster should be protected from injury and infection. Food fads should be avoided and his nutritional demands should be satisfied. His sight and hearing should be kept at the best possible acuity in order to avoid increasing his feeling of isolation. Regular physical examinations and measures directed at improving health will help in dissipating fear of invalidism and excessive dependence. An active healthy routine with a definite goal in mind will prevent habit deterioration. The oldster should be encouraged to continue at a job as long as possible and to have suitable interests to replace it when he is retired. He should be discouraged from believing he is wise just because of his age, and from interfering in the lives of his children, even if the children are making a "mess of things."

The psychotherapy of older people is not as hopeless as many think; a fatalistic attitude is unnecessary. One principle of therapy is to give them a chance to talk about themselves and their problems. Respectful attention and interest, not maudlin sympathy, is what they want. The therapist must recognize the oldster's need for physical and emotional security and for independence. He must give the patient an opportunity to work out his own solutions and not impose prejudices upon him. Moreover, it must be recognized that such a patient still has capacities for growth and change. An old person does not lose his personality and individuality just because he is old.

One of the most serious problems with which a therapist is faced is that of unsatisfactory relationships within the family group consisting of two or three generations. The problems in parent-child relationships in old age are as serious as those in childhood, except that the oldster constitutes the problem child in this case. If a child refuses to help a parent, either because it would disrupt his own family or because of overt hostility, the refusal is apt to engender severe conflict and guilt feelings in the child, and these must be worked through to some sort of solution. The kind of living arrangement best suited for an elderly person is dependent on the individual needs, physical and emotional, of that person. For one patient it may be an independent home; for another, full institutional care. Such a decision cannot be made lightly. Where the oldster presents a cultural problem, every effort should be made to fit him into a group with cultural background similar to his own, lest his already existent isolation will be exaggerated. Like the rest of us, the oldster needs provision for his physical health and comfort, affection from those about him, recognition of his abilities and limitations, some means for self-expression in work or play, and economic and emotional security.

PSYCHOSES OF THE AGED

The primary presenile dementias include such disorders as Alzheimer's and Pick's disease, but not every organic brain disease beginning in the presenile period is one of these syndromes. Only after such disorders as cerebral arteriosclerosis, cerebral syphilis, intracranial tumors and post-traumatic conditions and other possible specific causes have been ruled out may a diagnosis of Pick's or Alzheimer's disease be considered. The differentiation between the two is academic but may be made by a pneumoencephalographic examination through demonstration of the circumscribed cortical atrophy of Pick's

disease or the more diffuse atrophy of Alzheimer's disease.

Senile psychosis and psychosis with cerebral arteriosclerosis are the commonest causes for admission of aged persons to state mental institutions in California. In the majority of cases there is evidence only of simple deterioration, but depressed and agitated, paranoid, presbyophrenic (confusion, disorientation, memory defects, and confabulation) and delirious reactions may occur. The depressed patients may respond quite favorably to electroconvulsive therapy so far as the affective components are concerned, but the substratum of intellectual impairment which is the result of permanent organic damage will remain unchanged. This must always be kept in mind when outlining the prognosis for such patients. Recent work on the role of large molecule lipoproteins in atherosclerosis offers possibilities for prophylaxis and perhaps of treatment for the atherosclerotic lesions so commonly appearing in the elderly.[1]

It has become increasingly evident that organic changes alone are not sufficient to explain the symptoms of these psychoses. The severity of mental symptoms does not necessarily parallel the extent of the cerebral lesions. Aged persons, apparently normal mentally until death, at autopsy may be shown to have changes in the brain as severe as or more severe than those observed in postmortem examination of patients with obvious senile and arteriosclerotic psychoses. It must be remembered, too, that even in organic psychoses like these, premorbid personality integration and situational stresses may play important roles in the mental illness. When it becomes necessary to hospitalize a patient who has one of the psychoses of the aged, the guilt feelings of children must be appropriately handled.

Delirious reactions in senile and arteriosclerotic individuals often occur and frequently go unrecognized. Etiological factors such as the injudicious use of drugs, especially barbiturates, infectious diseases, metabolic disorders such as uremia, diabetes, pernicious anemia and vitamin deficiencies, and posttraumatic conditions should be kept in mind constantly. The syndrome of clouding of consciousness, fear and apprehension and bizarre illusions, hallucinations and delusions may be superimposed on an already damaged nervous system and should be clearly recognized as delirium. In treatment, restraint of the patient should be avoided. If drugs are ordered, the judicious use of paraldehyde is recommended rather than barbiturates. Continuous bath or sedative packs should be ordered for sedation, and special efforts should be directed at combating dehydration and keeping up salt intake. The administration of glucose, insulin and vitamins is frequently indicated. Most delirious patients are frightened. Since they tend to misinterpret various stimuli, the source of stimuli should be reduced to a minimum. A reassuring nurse, familiar persons and surroundings may help more in quieting a delirious patient than any sedation.

MENTAL HYGIENE

The following is the author's digest of the discussion among the members of the Section on Problems of the Aged at the Governor's Conference on Mental Health.[2]

1. An adequate mental hygiene program, leveled at educating the public about the medical and psychological needs and problems associated with the aging process, is very important. Such education should begin in the schools and continue throughout adult life. Young people are not generally well motivated toward studying the problems of advancing maturity since the problems have not yet become personal to them. Education should be leveled first at the group in which the problem is real: the elderly people themselves, and the friends and relatives who find it necessary to deal with them. The general public should realize the large number of aged in our population, and appreciate that they desire some share of attention, just as children and adolescents do. Physicians, nurses, attendants, and social workers all need education along these lines. Until recently, many physicians have shown little interest in the chronic disease problem, and just as there has been developed an increasing interest in the psychological aspects of disease in general, so can an interest in the psychological problems of the aging process be developed with appropriate education. All facilities of the state, including the county departments of welfare, the State Department of Public Health, and other agencies of the state government, should foster and encourage the organization of local agencies in the community to carry on this educational program. Mental hygiene societies, adult education classes, parent-teacher association groups, community chest organizations, churches, etc., should be asked to assume responsibility to give all the necessary encouragement to such a program, emphasizing the importance of the individual's assuming responsibility himself about the problems of aging to the extent to which it is possible for him to assume it. The family and relatives of sick elderly people are very important in this problem. They are intimately involved, emotionally and practically, since nursing care often falls to them, particularly to the woman in the family group. They need guidance and support and opportunities to ventilate their anxieties.

2. Every available facility, private and public, should be made available to all for the maintenance of physical health and the repair of physical defects before they become pronounced handicaps to mental health. This is considered of prime necessity, and should be part and parcel of a general public health program at both private and public levels.

3. In the economic sphere, opportunity for work is the crux of most of the problems on a financial level for the aged person. It is generally agreed that chronological and arbitrary age limits forcing people into retirement are not the best method of approach, but government, as well as industry, is often

guilty of such an attitude. Industry feels that it is in business to make a profit, and that if the elderly person is more of a handicap than an asset in the industry, it is not fair to burden such an industry with him. There is also the very real problem that such a person with a physical or mental handicap may constitute an industrial hazard for which the company is responsible and liable, and under the present law such liabilities cannot be waived. There is at present no obvious solution to these problems. Further research and investigation are indicated to produce ways and means by which to set up standards to base retirement on a person's general physical and mental condition rather than on calendar age alone. This should apply to government as well as to industry.

4. Those people who, because of physical or mental handicaps, are unable to work, and those people who are looking forward in the near future to retirement, should be encouraged to develop hobbies and interests to take up their time, and communities should be encouraged on private and public levels to develop facilities for recreation, social intercourse, education, and hobby training for the older age group. Such a center in San Francisco is proving extremely popular and beneficial. Use of the adult education departments in hobby training, already popular in metropolitan communities like San Francisco and Los Angeles, should be extended to other localities in the state. Such a program would do a great deal to dissipate feelings of loneliness and isolation, and might help to solve some of the psychosomatic problems presented by the elderly.

5. Throughout the state, especially in the metropolitan communities, there have sprung up many so-called family style boarding homes which are licensed by the state as "foster homes for the aged." For elderly people who are well enough to live in such a group, and who have the financial means to do so, this may prove an ideal solution for a limited number of the elderly in that they still adhere to some sense of independence. So long as they have opportunities for appropriate care and treatment of physical and mental ills, either from private sources if they can afford it, or public facilities if they cannot, such a program would undoubtedly do a great deal in keeping many of the homeless aged from being committed to large custodial institutions. It is important that aged persons living in such groups have facilities for recreation, education and hobby training available. It is important, too, that people in charge of such family style boarding homes be educated, if necessary by the state, as to the physical and psychological needs of the elderly group.

6. A detailed study should be made of the advantages of developing a so-called "home care" program similar to that which has been developed at Montefiore Hospital, New York City, for the care of patients who have chronic diseases of various kinds. In such a program the home is treated as if it were an extension of the hospital environment. Opportunities are provided for the patient who lives at home to get medical care, visiting nurse services, housekeeping services, transportation, occupational therapy, and social service. Not only could this be a saving in hospital costs, but, even more important, some patients who do poorly in the hospital may respond dramatically well in the environment of sympathetic and affectionate care in their own homes if they are surrounded by attentive relatives. This would require careful social service investigation to be certain that such a program could be successful, and it could be only where there is close rapport between the family and the patient. It would require that the members of such a family needing guidance and support could have opportunities to ventilate their anxieties to physicians or social workers. It is recognized that the majority of elderly people do not need hospital care, and that a large group of them who are now being hospitalized might not require it under such a program.

7. For persons who have early signs of mental deterioration but who are still not so sick physically or mentally that hospital care is necessary, and who, because of various emotional involvements cannot be cared for in their own homes by their own relatives, foster homes might be found with the aid, if needed, of social workers through public or private agencies. Such social workers should be considered part of a therapeutic team, together with the nurse and physician, and should be concerned with the treatment of patients on psychological and environmental levels. There should be enough of them that all their time is not taken up solely with the question of eligibility and they should be of a quality to be able to assume the responsibility of appropriate treatment at a social work level.

8. If more medical and psychiatric diagnostic and treatment services could be made available in physicians' offices, or in the out-patient clinics of general hospitals, many of the patients who are at present being hospitalized might be treated on an out-patient basis for long periods before hospitalization became necessary. This would, of course, be much better and cheaper than expensive hospital care, but for communities in which such facilities are not available, the organization of traveling clinics would be necessary.

9. Elderly patients requiring hospitalization for physical or mental handicaps should not be isolated in institutional homes for the aged, although those could provide, in appropriate cases, advantages of group living and opportunities for medical and nursing care, especially if such homes were geared to individual needs. Such an institution should be built with a majority of its rooms single ones, rather than composed of large wards, to give the patients a modicum of privacy.

10. The wisdom of sending the majority of patients with senile and arteriosclerotic psychoses to state mental institutions, most of which are situated many miles away from the homes of patients, is questioned. The dislocation of an elderly person from his home and family often does much to has-

ten deterioration and early demise. The move from home to general hospital, to county psychopathic ward, to state mental institution is upsetting even to a young person, but more so to the elderly who depend so much for the satisfaction of their needs on familiar objects, people and surroundings. Voluntary public and private hospitals should be enlarged when funds and building facilities become available to provide units adjacent to the general hospital, and these units should contain a proportionate number of beds reserved for patients with the physical and mental problems of old age. The majority of these patients do not of necessity require mental hospital care in the ordinary sense. The depressed and dangerously paranoid could be committed to mental institutions; but for those whose problems are essentially those of physical and mental deterioration, appropriate general medical care is the prime necessity. Patients who were located in treatment units adjacent to large general hospitals could be more easily visited by their relatives, and they could be made part of a general rehabilitation program directed at the problems of chronic diseases in general. This would serve also an educational purpose in enhancing the interest of visiting physicians and young resident physicians in training. If such a program is carried out, and the burden of care of elderly mentally ill patients is removed from the state institutions to the county level, it is assumed that financial assistance should be provided by the state to approved hospitals in proportion to the services rendered. In those counties which would not have facilities to care for such patients, arrangements could be made on a cooperative basis with adjacent counties which had appropriate facilities.

Such a program would give us a good start in helping solve some of the problems presented by an increasingly large elderly group and it should help relieve the heavy burden on the state mental institutions for the care of many patients who require for the most part adequate medical nursing care.

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The Non-Group Subscriber—A Blue Shield Problem

Charles Gordon Heyd, M.D., *New York*

SUMMARY

The basis of prepaid voluntary medical insurance is to provide adequate medical service with the most inexpensive premium rate that is actuarially sound. This has been accomplished up to date by group enrollment. However, this does not provide for enrollment of a large number of insurable persons who are not members of groups. Experience with non-group subscribers to United Medical Service, New York, is discussed and suggestions are made for simple, inexpensive means of enrollment and premium payments.

THE proponents of a compulsory health program are wont to declare that the Blue Shield plans do not provide equal opportunity for enrollment of individuals who cannot be covered by group enrollment.

The problem of non-group enrollment in Blue Shield Plans is a challenge and demands a solution. In the development of Blue Shield Plans it was imperative that attention should be mainly directed to the acquisition of groups. Group enrollment gave the maximum actuarial security with a minimum of constant effort. In non-group enrollment satisfactory actuarial results were to be obtained on many occasions only by trial and error. In the beginning it was frankly acknowledged that a very large percentage of our population could not be enrolled on any group basis. The non-group subscribers fall into three separate and distinct categories:

1. *The Group Conversion Direct Payment Subscribers*

The subscribers in this category were originally group subscribers and their subscription charges were paid through the group. When these subscribers leave their respective groups they have the privilege of converting to a direct payment basis by paying the subscription charges directly on a quarterly, semi-annual or annual basis. From an underwriting point of view the experience with this conversion class is naturally poor by reason of the fact that only a relatively small percentage of all those who leave groups continue on a direct payment basis. United Medical Service, New York, lost about 50 per cent of the subscribers who left a group and did not convert. This 50 per cent ratio of cancellations resulted in loading the non-group enrollment against the company. It was fair to assume that the 50 per cent group conversion direct payment subscribers who converted anticipated the need for medical service and therefore converted to direct non-group payments. Experience with this group was not satisfactory.

2. *The Group Direct Payment Subscribers*

The subscribers in this category are primarily enrolled as part of a direct payment group. Theoretically, they are a group but for a variety of reasons it is impossible to obtain a group remittance. Therefore, the subscriber must personally make an individual remittance from the commencement of his enrollment. Subscribers of this class are enrolled just like those of any other group and must meet the regular group enrollment underwriting requirements. The enrollment must meet the established percentages but the subscribers do not have to provide health statements. Inasmuch as subscribers of this class make individual payments from the effective dates of their coverage, there are no group conversion subscribers from this category of business. When a group direct payment subscriber leaves the group through which he was originally enrolled, he merely continues to make his payments directly as he did while he was in the group. The experience for this class of business is generally good, due to the fact that the enrollment in the first instance must meet established enrollment underwriting requirements, and also due to the fact that these people are accustomed to making individual remittances from the beginning of their contract and therefore have a personal interest in their coverage.

3. *The Miscellaneous Direct Payment Subscribers*

The subscribers in this category cannot enroll through groups, either on a group remittance or on a group direct payment basis. They must submit a health statement which, after being screened, is individually underwritten. The experience with this type of business is generally good because the contracts written do not provide for maternity coverage and because the risks are individually underwritten. Inasmuch as photostatic copies of the applications made by such subscribers are attached to the contracts issued, such contracts are subject to cancellation in the event that subsequent developments indicate that false statements were made in the application. Obviously, it is more expensive to process direct payment subscriptions than group remittance subscriptions, largely because direct payment subscriptions are individually handled. However, it is a clear-cut operation and can be recommended to

The author is Chairman of the Board and President of United Medical Service, New York.

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any plan, as it affords many subscribers opportunity for securing protection which is not otherwise available to them.

The historical background of the development of the non-group subscriptions is interesting and, like all experience based upon trial and error, was productive of much enlightenment. For real community coverage there must be some provision for individual or non-group enrollment. The Associated Hospital Service of New York was the first plan in a large city to write miscellaneous or non-group enrollment.

The Associated Hospital Service had permitted the formation of miscellaneous groups of ten which were, in effect, nothing other than groups of ten persons who desired coverage. There was no common denominator as obtains in groups formed from the employees of the same employer. In addition to self-formed groups of ten, there were community groups under which persons individually filed applications which were held by the plan until it had on hand a theoretical community group consisting of a specified number of applications. The experience under this quasi-group enrollment was so unsatisfactory that Associated Hospital Service was compelled to cancel the contracts of some 200,000 subscribers who had been enrolled without bona fide group relationship.

Following the cancellation of the contracts Associated Hospital Service offered the subscribers opportunity to apply for reenrollment subject to a detailed application containing questions intended to bring out the past medical history and the present condition of health and any adverse underwriting factors. In view of the extraordinary losses for maternity care under the former non-group enrollment, Associated Hospital Service did not continue maternity benefits under the new non-group enrollment. The practice of omitting maternity benefits on non-group enrollment has continued to date. The fact that maternity benefits are not provided under these contracts presumably has had no damaging effect on public acceptance, as is indicated by the steady growth of this class of business. Under Associated Hospital Service there are now nearly 250,000 non-group subscribers; under United Medical Service nearly 100,000 non-group subscribers. Further indication of public acceptance is the fact that the annual rate of cancellation of contracts under non-group enrollment is lower than under any other class of enrollment.

These changes were highly successful, and Mr. Louis Pink, chairman of the board of directors of Associated Hospital Service, could report that non-group enrollment in Associated Hospital Service was encouraged in 1944 as a public service, so that self-employed persons, and others without group affiliations, would not be deprived of protection against hospital costs. Age limits were raised from 60 to 65 to enable older persons to join. (From fewer than 40,000 non-group members in 1944, Associated Hospital Service reached a total of some 240,000 non-group subscribers by the end of 1950.)

Persons who are self-employed or employed where there are too few employees to form a satisfactory group should by all means be provided with an opportunity to obtain Blue Shield protection. Blue Shield certainly cannot fulfill its proper destiny unless its protection is made available to all insurable members of the community.

The problem is vital both to Blue Shield and to Blue Cross plans. At present in the New York area served by Blue Shield and Blue Cross, groups are formed where there are at least four employees in an organization. If there are fewer than four employees, individuals are eligible for coverage on a non-group basis after filing an application containing all pertinent medical information and certifying that the applicant is in good health.

Experience has proved that individual enrollment can be established on a sound basis. Certain safeguards, of course, must be established in order to achieve a proper selection of risk, and this invariably involves at least a statement of health and previous medical history and careful examination of the application before acceptance. It is also necessary to indicate that the contract issued in such cases cannot include protection for maternity service because there appears to be no way to obviate services above cost if maternity benefits are included. Obviously, a healthy young couple who desire to raise a family would quickly embrace an opportunity to enroll if maternity service was provided, and in reasonable time a claim would be created. Waiting periods of 10 or 12 months are not sufficient deterrents or obstacles to prevent adverse experience. Nevertheless, Blue Shield protection can be made available for all other causes requiring medical care and involving hospital admission so as to make the plan sufficiently attractive to those who seek protection against medical costs.

In claim administration, claims of non-group subscribers are scrutinized much more carefully than those of group subscribers in view of the representations of good health at the time of enrollment. It has been found necessary to rescind contracts if there is evidence of misrepresentation in the application at the time of enrollment.

All Blue Shield plans must study and analyze the experience with very small groups. It is probable that a tabulation of results will demonstrate a very high claim ratio and raise a question as to the wisdom of accepting these risks, regardless of the waiver of known and preexisting conditions, without adequate screening-controlled enrollment.

In contrast, the successful experience with the non-group direct payment category can be accounted for in part by the careful screening based upon individual medical history reports. It might be in the better interest of all concerned if enrollments in the smaller groups were screened in the same fashion. Properly handled, non-group enrollment can be a safe risk for a medical care plan, and at the same time provide coverage for many people who are not eligible for group enrollment. United Medical Service has found, however, that it is not possible to

offer unrestricted non-group enrollment because too often it attracts only those who need immediate medical care.

United Medical Service limits non-group enrollment to people under the age of 65 who are self-employed, such as shopkeepers and professional men; those who are not employed, such as widowed or divorced housewives; and those who are employed where there are fewer than four employees. Maternity benefits are not given to non-group enrollees. Waiting periods — six months for removal of tonsils and adenoids and 11 months for treatment of preexisting conditions — are also a consideration because they are imposed on all but large groups with a high percentage of enrollment. The United Medical Service non-group application form includes questions about the medical history of the applicant and his family dependents for the past five years. Between 11 per cent and 13 per cent of the non-group applications received are rejected—usually because of the medical histories. People who have had recent hospital care, especially in connection with surgical treatment, are frequently told to apply again at a later date. A few applicants are taken upon waiver of care for very specific ailments.

The non-group application is photostated and becomes a part of the contract. The right is reserved to rescind contracts within a two-year period if there is any evidence of fraud. Rarely are contracts rescinded for that reason, but when they are, all subscription dues are returned.

To keep the rate structure as simple and fair as possible the non-group subscriber is charged a premium rate higher than that charged group subscribers but exactly the same as the rate for members who leave a group and continue membership on a direct payment basis. These rates average about 23 per cent more than the group enrollment rate. Because of the difference in premium rates, the formation of groups has been greatly stimulated.

Michigan Medical Service has been carrying on at stated intervals a community enrollment drive for non-group subscribers. The net result of these campaigns shows that about 3 per cent of the residents subscribed for the non-group plan and another 3 per cent subscribed to group plans during the community drive. These intensified periodic efforts required at least two months of preparation and were very expensive; at one time the cost for each such enrollment was five dollars. In addition, the combined loss ratio of the Michigan Hospital Service and the Michigan Medical Service was a little over 100 per cent.

The community enrollment drive is in pronounced contrast to the procedure followed by United Medical Service (New York), which handles all such business through correspondence. U.M.S. sales representatives are not expected to seek non-group enrollment and no sales production records are maintained to give credit to a salesman who may have occasion to bring in one of these applications. Enrollment inquiry cards and literature with respect to non-group enrollment are included with certain mailings from the U.M.S. office. Inquiry cards and literature are also available in doctors' offices and in hospitals. Through these sources non-group enrollment is consistently increasing—at a minimum of acquisition expense. During the year 1950 the gain in U.M.S. non-group enrollment was nearly 20,000 subscribers.

At present, most Blue Shield plans are dubious about individual non-group enrollment. While they recognize the vast number of potential subscribers in non-group enrollment, they have been afraid that the premium rates will not sustain the over-all cost.

Most Blue Shield plans require non-group subscribers to make quarterly payments instead of monthly payments as under group enrollment. Quarterly payments are more painful than monthly payments, particularly for persons in low income groups without reserve funds from which to make them. In addition, billing and collections by the usual orthodox means are expensive procedures.

A number of conferences were held with the Greater New York Savings Banks Association to consider ways and means of having non-group subscribers go to the nearest savings bank and pay premiums monthly. Out of the conferences came a plan by which payment could be made very easily by giving the subscriber a premium book consisting of 12 pages—one page for each month. Each page would be composed of three identical coupons. The bank would give one of the coupons to the subscriber as a receipt, send one to the company, and hold one for its record. There would be many advantages in such a system. The bank would get additional deposits and make contact with potential customers. As most subscribers would have easy access to a neighborhood bank, payments could be made monthly without much effort. The medical care plan would save the cost of billing for and collecting premiums from non-group subscribers.

Dr. Hannah, medical director of the medical care plan operating in Toronto, has perhaps pioneered in having payment of monthly premiums made at any of several banks in the territory. After several years of experience, he reported that there was an insignificant delinquency of payments by subscribers in this category.

One of the advantages of making non-group enrollment available is that it offers an excellent basis of obtaining knowledge of where potential groups exist in the community. When a medical care plan offers a non-group enrollment it invites everyone in the community to seek enrollment and to answer requests for information concerning employment status. From such inquiries the plan is then in a position to learn where there are potential groups and to take proper steps to enroll them. An interest expressed by the inquirer thus leads to greater enrollment and if group enrollment is not possible the protection of the plan may still be offered to the applicant. U.M.S. has at all times been careful to see that non-group enrollment does not compete with group business. The backbone of Blue Cross and Blue Shield business is group business. If non-group

applications were accepted from persons who could be enrolled through groups at their places of employment, the management of the firm for the group might not continue its support. Similarly, the management might deny U.M.S. the privilege of organizing a group; employees might be told to apply individually on a non-group basis.

Experience has indicated that if an applicant is employed in a group where group enrollment is possible, then enrollment should be obtained only on the basis of a group. Not until all means of obtaining group enrollment have been exhausted should consideration be given to providing non-group enrollment.

The request for non-group enrollment for persons employed where there are a sufficient number of employees to form a group in most cases represents the most effective sources of group enrollment. In replying to such an inquiry, the advantages of group enrollment are stressed and the applicant invited to make his interest known to his employer. The plan can then immediately contact the employer, stating that interest has been expressed among his employees. It is at this point that the sales effort for group enrollment begins and, when properly applied, more often than not results in the enrollment of not one person but a group of persons. Consequently, when employers become aware that only through their cooperation and participation can their employees obtain the protection of the plan, then the group effort becomes easier and the enrollment is achieved on a more satisfactory basis both from the actuarial point of view and from the point of view of more stable and continued enrollment of those who are in greatest need of Blue Shield protection. The social objective, the solvency and the usefulness of any Blue Shield plan rest upon the integrity and character of all who participate in its activity—the public, the subscribers, the physicians and the plan. One discipline must be rigorously enforced by every voluntary prepayment medical plan —that the promises of services must never exceed the ability to pay for them.

The caption "Prepayment Insurance" is no magic sesame. It opens no doors to wealth. It creates no money. No voluntary prepayment medical plan should promise more than the premium rate will sustain. Premium or insurance money does not buy more than any other money in the market. In fact, at present its purchasing power is diminishing rapidly and the continuance of the inflationary spiral will seriously interfere with the premium rate structure of all Blue Shield plans. The solvency of Blue Shield plans must not be maintained at the expense of the quality of service or by infringement upon the fair remuneration to the physicians rendering the services. Medical service means adequate remuneration to the physician so that all concerned are relatively satisfied. It is well to remember that cash indemnity insurance provides only dollars to pay for medical service but it does not provide medical service. Nearly 72 per cent of the total enrollment of all Blue Shield plans is held by plans offering service benefits.

116 East 53rd Street.

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Cortisone in Treatment of Bronchial Asthma

MARVIN S. HARRIS, M.D., *Los Angeles*

SUMMARY

Twenty patients with intractable asthma were treated with cortisone on various dosage schedules. Results indicated that a rapid improvement in the asthmatic state may be expected in four to five days with high level dosage of the hormone—usually a total dose exceeding 200 mg. per day at the beginning. If treatment is discontinued after a week, relapse usually will occur within a period of eight days. If small doses are given two or three times weekly, following initial response, relapse may not occur for 20 or 30 days. The interspersed administration of ACTH during an attempt to discontinue cortisone apparently was of no value. It therefore appears that cortisone control of intractable asthma is dependent on large dosage until clinical improvement is obtained, then approximately 100 mg. two or three times a week for maintenance of a reasonable state of health.

THE advent of cortisone or Compound E and its physiologic progenitor, adrenocorticotropic hormone (ACTH) has offered possibilities in the therapeutic management of bronchial asthma. It has been demonstrated that both these substances are capable of protecting the shock organs, the lungs, against the antigen-antibody reaction which is responsible for the clinical manifestations of the hypersensitive state.[2] It should be emphasized that there is no clear-cut evidence that asthma can be considered, in any sense, a deficiency disease; that is, that there is any adrenocortical insufficiency other than that series of changes in the adrenal cortex which is usually associated with the exhaustion phase of the alarm reaction. The summation of experience so far would indicate rather that the administration of cortisone or ACTH creates an altered state[3] in which the phenomena of hypersensitivity are absent.

This altered state consists of a number of changes in the body, especially in electrolyte metabolism, but affecting also many other phases of body chemistry and physiology. The most important, in relation to the problem at hand, is the tendency towards sodium retention with its effect particularly on the cardiovascular system in long-standing asthma complicated by emphysema. Potassium and chloride loss also occur during the administration of therapeutic doses of cortisone and ACTH; this may be compensated by administration of oral potassium chloride. Hypertension has also been noted; it may be either transient or prolonged. A diabetic state has also been observed in the course of therapy. Following treatment, a state of mild cortical depression has been noted, manifested largely by weakness and decrease in the excretion of 17-ketosteroids in the urine. Recovery from this state is usually complete.[3]

CLINICAL MATERIAL

The present report is based upon a study of 20 patients with bronchial asthma who were treated with cortisone by intramuscular injection. The patients ranged in age from 16 to 86 years. No patients in the pre-puberty period were accepted because of the possibility of endocrine disturbance precipitated by cortisone therapy. All of the 20 patients during a period of observation before treatment were found to have asthma which recurred at least once daily, and the history as obtained from the patients indicated the occurrence of daily episodes with no periods of well-being, and no periods in which the asthma had been less than moderately severe. For the purposes of this discussion, the asthma is graded as follows: Zero indicates no wheezing, either objective or subjective; one plus indicates wheezing which requires no medication; two plus, wheezing which responds to oral medication, usually one of the ephedrine compounds; three plus, asthma which requires either epinephrine by hypodermic administration or by spray; four plus, asthma which is not responsive to epinephrine or which relapses within a few moments after epinephrine administration. Throughout the period of observation of all patients the grading of asthma has been carried out on this basis. The grading has been, as far as possible, entirely objective, and based essentially on need for and response to medication during the preceding period of 24 to 72 hours.

METHOD AND DOSAGE

Treatment was given in essentially five different ways. One group of four patients was treated intensively for a period of one week, and then retreated after relapse. A second group of seven patients received one week of intensive therapy, followed by decreasing low-level maintenance therapy. A third group, four patients from Group 2, was retreated at high levels of therapy and was given intermittent doses of ACTH during an attempt at tapering off. A fourth group of nine patients received one week of intensive therapy, followed by high-level maintenance therapy. Three of the patients in the fourth group were taken from one or

Part of the material (Cortone®) used in this study was supplied through the courtesy of Dr. A. A. Gibson, Medical Director of Merck & Co. Inc.

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another of the preceding groups after relapse. A fifth group of three patients received mid-level therapy throughout. High-level therapy is defined as daily doses in excess of 150 mg.; mid-level therapy as daily or less frequent doses not exceeding 150 mg. and usually 100 mg.; low-level therapy as less than 100 mg. in any day, usually 50 mg. daily or less often.

Group 1. Short Intensive Treatment.

Among the four patients who received one week of intensive therapy, which was then discontinued, all had complete relief of asthma for periods of one, three, five and 30 days. Relapse occurred at the end of the periods indicated, but in no instance was the disease then as severe as it had been before therapy. Re-treatment in the same manner in all these cases resulted again in improvement, but of less pronounced degree than that obtained with the first course of treatment. Although it is possible that this was because the patients may have lost some faith in this "magic compound," subsequent observations indicated that this phenomenon was probably based on the activity of cortisone rather than on a psychogenic factor.

Group 2. Intensive Therapy and Low-Level Maintenance.

Seven patients who received intensive therapy for a week and subsequently were given small tapering doses of cortisone, usually in amounts of 50 mg. two or three times weekly, had the same rapid response as the first group with almost complete disappearance of asthma within a four- to five-day period. Remissions in this group lasted for 12, 14, 21, 21, 25, 30 and 35 days before relapse occurred.

Group 3. ACTH During Discontinuance.

At a later date four of the patients from Group 2, who had had control with high-level dosage, were given ACTH alternating with the maintenance doses of cortisone. This procedure did not materially delay relapse, which occurred after 15, 21 and 30 days in three patients. The fourth did not have relapse after 60 days, but in this case the previous history indicated that the asthma would have stopped spontaneously at about the same date that treatment was stopped.

The relapse in two of the patients in Group 2 was as severe as the asthma before treatment, and for a time these patients appeared to be resistant to increased doses of cortisone.*

One of the patients in this group who was given increasing doses supplemented by Mercuhydrin® finally responded for a second time, but not to the same extent as to the first course. Improvement at the one plus and two plus level then persisted for 30 days, when an additional period of increased dosage was necessary to get the patient back to a one plus level. In the other case, that of a 16-year-old boy, the disease appeared to be totally resistant to the cortisone, whereupon it was stopped for a period of 12 days. During that time it was necessary to hospitalize the patient three times to control extremely severe status asthmaticus by giving fluids intravenously — epinephrine, aminophylline and iodides. After 12 days without cortisone, there was excellent response to a new period of intensive therapy with complete disappearance of asthma for 15 days, followed by a mild relapse when an effort was made to discontinue the cortisone after several doses of ACTH. Subsequently, the condition of the patient was well stabilized with a dosage of 100 mg. three times weekly. This patient was the only one in the series in whom "moon face" and severe acne developed, and both of these manifestations of cortisone activity receded as treatment continued.

Two other patients in this group responded satisfactorily to increased doses of cortisone, and in them the disease subsequently remained at a zero to one plus level for 30 and 40 days with dosage of 100 mg. two or three times weekly. The remaining three patients did not resume treatment, since the very severe status for which treatment had been initiated did not recur over periods of 14, 55 and 64 days, although all of them had partial relapse.

Group 4. Intensive Treatment and Mid-Level Maintenance.

The additional six patients who received one week of intensive therapy, followed by prolonged administration of mid-level maintenance doses for four to six weeks, had rapid regression of asthma to a zero or one plus level within four to five days. At the time of this report they had not had relapse. In three cases even mid-level dosage was discontinued and relapse had not occurred after 14, 40 and 60 days. In the cases in which maintenance dosage was continued, there was no evidence of any of the undesirable secondary effects of cortisone therapy.

Group 5. Mid-Level Therapy.

In three cases in which there was pronounced emphysema and suspicion of cor pulmonale, only mid-level therapy was given throughout. It induced improvement or disappearance of wheezing respiration by the end of the second week. Clinical improvement was not as dramatic as in the other groups, but in the fourth week all the patients were improved.

RESULTS IN RELATION TO DURATION OF ASTHMA

In seven of the 20 cases the history was such as to indicate that the asthma could be expected to be self-limiting in its course, although at the time of

* There are various possibilities to explain an increase of symptoms during adequate cortisone dosage. The first and most obvious is an increase in the causative factors initiating the asthma. The second, which was encountered in three patients, is an increase coincidental with evidence of increased tracheobronchial infection. This condition responded satisfactorily to adequate antibiotic therapy. A third possibility is that of allergic reaction to the cortisone. This was not encountered in this series as far as can be determined. The fourth explanation of increased symptoms, described here and observed in three patients, is based on the association of increased skin puffiness with increased symptoms of asthma. Electrolyte studies at these times showed no significant changes in the blood levels, but the response to mercurial diuretics suggested that local fluid retention, based on electrolyte changes not reflected in the blood studies, formed the basis for the clinical changes.

treatment it was resistant to all other forms of therapy. Six of the seven patients with disease of that order had sufficient improvement to permit discontinuance of cortisone, and in all of them the disease was less severe than it had been before cortisone was given. Three were relatively free of asthma after 14, 40 and 60 days, and three had one plus and two plus attacks. The seventh patient had almost immediate relapse on cessation of treatment.

Thirteen of the patients had asthma which, according to the history, had been intractable for more than two years, and there was nothing in the history that would indicate that the disease would regress spontaneously. In order to keep the asthmatic state in these patients at levels from zero to two plus cortisone therapy had to be continued at a level of not less than 100 mg. two to three times weekly for periods of from three weeks to three months, with periodic increases in the dose to compensate for temporary exacerbations. In all cases some degree of relapse occurred within eight days of any attempt to stop treatment completely.

LATE EFFECTS OF CORTISONE

Because treatment was not continued over long periods in this series, it was not possible to determine the maximum period of therapy to which a patient may be subjected without irreversible changes[2] in adrenocortical function, in the endocrine system in general, or in other phases of body metabolism which are affected by cortisone. At the time of report there was no evidence of irreversible changes of that nature.[3]

There was some hope at the beginning of this study that over a period of time the continued use of these substances might result in improvement of the organism's ability to control bronchial asthma. Except for the improvement that usually follows prolonged symptomatic control of asthma, there was no evidence that such a change had taken place. There is reason to believe that adrenocortical depression occurs in patients given cortisone and that it persists for some time after cessation of therapy.[3] In the cases in which ACTH was given while the dosage of cortisone was being tapered off, Thorn tests stimulated no response in the circulating eosinophils up to four days after the last injection of cortisone.

CASE REPORTS

Case 1: The patient, a 22-year-old male, had had intractable asthma since childhood. For a year previous to treatment he had been using an epinephrine spray, supplemented by injections of epinephrine at least once or twice daily. Injections of cortisone were given each day for seven days, beginning with a total dose of 300 mg. the first day, followed by two injections of 200 mg. and then four of 100 mg. By the third day of treatment the patient was entirely free of asthma and remained so for a period of five days. During this time the vital capacity rose from 3,200 cc. to 4,800 cc., with an improvement in the expiratory rate. Ten days after the beginning of therapy, asthma recurred at a two plus level and by the 22nd day had reached a three plus level. At that point retreatment was initiated upon the same schedule used in the first course of treatment. After five days the asthmatic state was at a one plus level. The subsequent course was one of gradual increase of asthma, until finally it was stabilized at a three plus level. Although the patient was somewhat better than before treatment, the therapeutic result was no better than with other successful methods of symptomatic therapy of asthma. However, the five-day response in which the patient was entirely free of asthma was extremely dramatic and fairly characteristic of the initial response to cortisone therapy.

* * *

Case 2: A 16-year-old boy with intractable asthma since infancy was in severe status asthmaticus when high-level treatment was started. By the fifth day, the degree of asthma was one plus, and by the seventh day the patient was essentially free of asthma. He remained quite well, except for occasional mild wheezing, for a period of 18 days while receiving small, relatively widely spaced doses of cortisone, the dose not exceeding 50 mg. at any time. After 20 days a relapse began and it was not allayed despite use of moderately increased doses of cortisone. Three admissions to hospital were necessary, and finally when moon face and severe acne developed, cortisone was discontinued. (In light of what is now known of cortisone therapy, it might have been better to increase the dose to a much higher level at that time.) As the patient appeared liable to die of asthma during the third hospital admission, it was decided that despite the side effects more cortisone would have to be given, since there seemed to be no other way of obtaining remission. High-level therapy was started again on the 53rd day, and again a striking response was observed. Asthma completely disappeared on the sixth day of treatment. Cortisone was then continued at levels of 75 mg. to 100 mg. daily. The time between injections was gradually increased and they were interspersed with injections of ACTH in the hope of stimulating the depressed adrenal cortex. This was unsuccessful and on the 91st day relatively high-level treatment was again initiated and there was fairly good response, with remission to the one plus level and finally to zero level after 11 days. The asthma then was quite adequately controlled, except for occasional episodes of two plus asthma, by giving injections of 100 mg. every two or three days.

* * *

Case 3: A man 49 years of age with severe asthma had very much the same response as the patient in Case 2—at the beginning, dramatic response to cortisone, followed by a relapse in 26 days; the relapse finally controlled by increased doses of cortisone; a second relapse shortly afterward when an effort was made to discontinue treatment by spreading out the injections of cortisone; recontrol of the asthma by increased doses of cortisone; and again the failure of interspersed doses of ACTH to prevent relapse when cortisone was discontinued.

* * *

Case 4: A 69-year-old woman with three plus asthma had temporary and satisfactory response to hospitalization and symptomatic treatment, but there was rapid relapse after only a few days. Cortisone was given and by the fifth day there was remission of asthma to one plus, and for 26 days the patient remained well while receiving small doses of cortisone, at first 100 mg., then 50 mg., and finally 25 mg. twice a week. Gradual relapse to a three plus level occurred and increased doses of cortisone were given. The asthma cleared completely on the seventh day of increased dosage. As in the other cases, an attempt to withdraw cortisone by injections of ACTH failed and it was necessary to resume the twice or thrice weekly injections of 100 mg. of

cortisone in order to control the asthma. With the exception of occasional episodes the patient had been in good health for more than 60 days at the time this report was prepared.

CONCLUSIONS

1. Cortisone is useful in controlling prolonged periods of asthma which are resistant to other forms of therapy, and in which the history indicates that the asthma may be self-limiting.

2. In chronic intractable asthma cortisone has a beneficial effect on the asthmatic state, but prolonged administration for periods up to three months does not result in sufficient change in the basic pattern of the asthma to permit discontinuance of therapy without some degree of almost immediate relapse. The relapse usually is not as severe as the disease was before treatment.

3. Since prolonged relief of previously intractable asthma may be effected, it might be well to initiate, during the remission, other forms of therapy of a more definitive nature.

4. Cortisone may have a useful role in temporary control of asthma during medical and surgical emergencies which may arise in the life of the patient.

6317 Wilshire Boulevard.

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Anal Infections Encountered in General Practice

MALCOLM R. HILL, M.D., *Los Angeles*

SUMMARY

Thoroughness in study of the anorectal canal to the ten-inch level serves to detect infectious lesions in that area in the incipient state and thus preclude the debilitating and destructive chain of events which follows when early treatment is delayed. The technical requisites of the routine examination are not beyond the scope of physicians in general practice, who can prevent many of the chronic and disabling complications by early diagnosis.

THE sum of all the discomfort caused by infectious lesions of the anal region and by complications arising from them, merely because symptomatic treatment was begun without resort to any sort of regional examination, would form a sad aggregate. This melancholy figure is all the more distressing in light of the fact that 85 per cent of anorectal disease can be diagnosed by inspection, palpation, and anoscopic examination. It is as incumbent upon a physician in general practice as upon any other to examine at least within the range of the naked eye and the gloved finger. He ought to be conversant with the various etiologic factors concerned in the development of infections in the anal region, the avenues by which such infections invade the adjacent tissues, the clinical symptoms resulting therefrom, the objective evidence to be noted on inspection, palpation, and anoscopic examination, the use of this evidence in differential diagnosis, and some therapeutic indications and practices.

ETIOLOGIC CONSIDERATIONS

The basic fact underlying all anal infections is the invasion by pathogenic bacteria of anal ducts and glands and regional tissues. The fecal material is funneled into the crypt (Figure 1), and in some circumstances—local trauma, for instance, may open a route—bacteria invade the anal ducts and glands. Invasion of the regional ducts may occur if they are obstructed and the glands are distended to the point of rupture. It is also possible that such invasion occurs indirectly by lymphatic avenues. The role of the crypt, duct, and gland system in the pathogenesis of anorectal disease was investigated and reported by the author and his associates[1, 2] (Figure 2). Nesselrod[4] illustrated the crypt orifices which

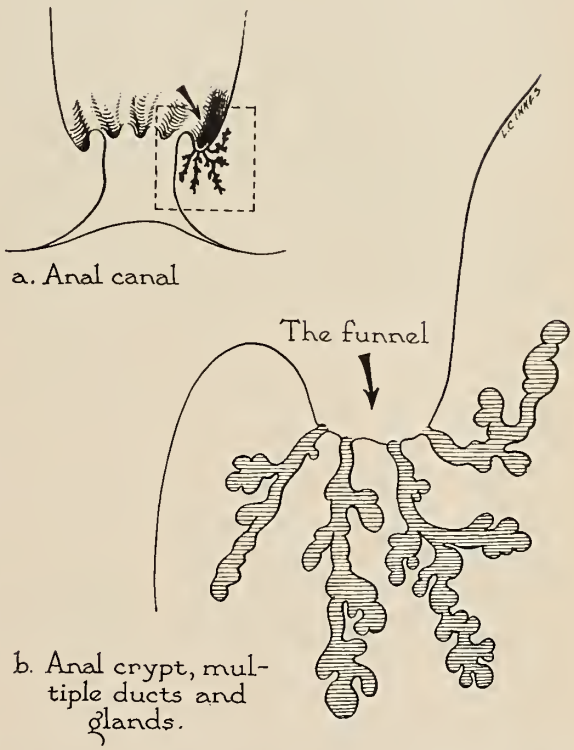

Figure 1. — Diagrammatic representation of the anal canal and crypt with "funnel" relationship to contiguous ducts and glands. (Modified from Nesselrod's textbook, "Proctology in General Practice," 1950.)

he believed served as "funnels" by which infection is guided into anal ducts and glands. It is now generally accepted that these glands play an important part in the genesis of infectious anorectal lesions, although all the possible intermediary processes are not fully known.

The clinical application of the transmission of infection through the system of anal glands (Figure 3) is one of correlation of microscopic changes which follow the various successive steps in the development of the disease process with the consequent clinical manifestations. Microscopic investigation confirms the impression that localized cellulitis involving duct and gland structures constitutes an early stage in the process. In the first place, involvement of the contiguous tissues is usually one of direct invasion following the more or less definite microscopic channel of anal glands, which, according to the previously mentioned investigation by the author and his associates, showed a wide individual variation, not only as to the number of glands present, but also as to their location and the depth of penetration. It is also possible that the spread of

From the Department of Proctology, College of Medical Evangelists.

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Figure 2.—Enlarged deep crypt with numerous ramifying anal glands. Lymphocytes are infiltrated around the mucus-producing glands. Hematoxylin- and eosin-stained; reduced from a photomicrograph with a magnification of 73 diameters. (Hill, J.A.M.A., March 1943.)

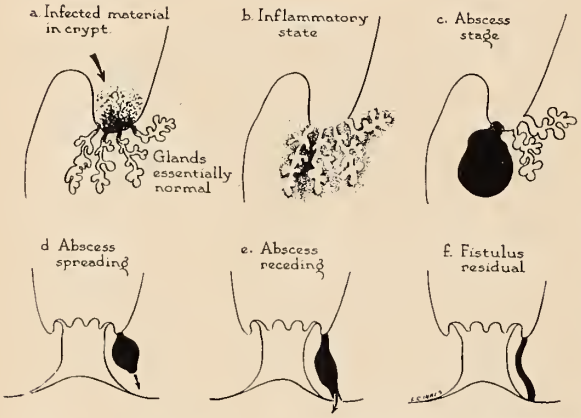

Figure 3.—Diagrammatic representation of pathogenesis of anal infection with resultant abscess and fistulous residual. (Modified from Nesselrod's textbook, "Proctology in General Practice," 1950.)

infection to these tissues is metastatic in nature—that infection is carried indirectly by way of lymphatic channels and blood vessels.

In diagnosis, anorectal inflammatory disease (Figure 4), by virtue of the complexity of etiologic patterns, cannot be considered a single disease. Furthermore, it may be manifest in more than one form in the same patient. For convenience, infectious anorectal disease can be grouped into two classes, direct and indirect, the classification depending upon the avenue of infection. Classified as direct disease are fissure-in-ano, abscess, and fistulous disease. Those of indirect origin include hypertrophy of anal papillae and contracture or stenosis of the anus.

Hemorrhoids, essentially a plexus of varicose veins surrounding the anorectal outlet, occur at a site of anastomosis of vessels of the systemic and portal circulation. As they are in close relationship with the anal ducts and glands, they are vulnerable to infection through supporting tissues. Then, secondarily, periphlebitis and phlebitis of these varicose elements produce acute swelling, capillary congestion and rupture, resulting in both extravascular and intravascular thrombosis — the so-called "strangulated hemorrhoid." A self-limited manifestation of this process is the single or multiple external thrombotic hemorrhoid.

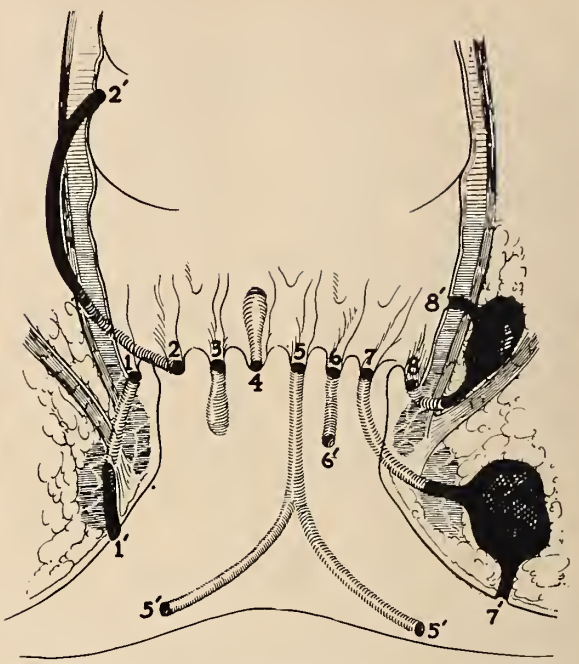

Figure 4.—Diagrammatic representation of the anorectal canal showing the variable pattern of spread of infection from the crypt line. Complete fistulas: 1, 2, 5, 6, 7, 8, primary openings; 1', 2', 5', 6', 7', 8', secondary openings. Sinus formation with possible fissure and ulcer formation: 3 and 4 respectively. Abscess: ischiorectal 7-7', supralevator 8-8'. (Modified from Nesselrod's textbook, "Proctology in General Practice," 1950.)

SYMPTOMS REFERABLE TO ANAL INFECTION

Even though a patient have symptoms of rectal disease only, complete history-taking and thorough physical examination must be routine. Study of a rectal disorder should never be so concentrated that the possibility of disease elsewhere in the body is overlooked. The cardinal symptoms of anorectal disease are alteration in bowel habits, pain, bleeding, swelling, purulent discharge, and loss of weight.

Alteration in bowel habit of organic origin may be caused by either infection or new growth. The size, shape, consistency, and color of stool must be correlated with this cardinal symptom. Ease and completeness of evacuation and the presence of protrusion or prolapse of tissue mass are related factors. It sometimes happens that change in bowel habit is attributed to functional disorder even in cases in which evidence of organic disease is observable by adequate visual examination.

Bleeding may arise from a lesion anywhere in the

intestinal tract. The appearance of fresh blood suggests the presence of bleeding in the lower colon, rectum, or anus. Blood which is bright red in nature and drips or spatters in the toilet basin or is observed on the toilet tissue more commonly is either from an anorectal lesion of infectious origin or hemorrhoids. But a physician should not conclude this to be so without adequate visual examination including anoscopic and sigmoidoscopic procedures.

Pain incident to anorectal inflammation is usually localized and is usually a dull aching or throbbing, bearing-down sensation. Acute anorectal pain which causes a patient promptly to consult a physician suggests ulceration, infection, or thrombosis of the regional vessels as the most likely cause.

Swelling of acute progressive type with pain, malaise, possible elevation of temperature, and leukocytosis indicates abscess formation. On the other hand, the sudden formation of a focal swelling with stinging sensation and pain about the anal margin indicates hemorrhoidal thrombosis, which may be associated with regional infection.

Discharge of a purulent character from the anus and anal margin, while sometimes incident to malignancy of contiguous tissues, is more commonly consequent to fistulous disease. On the other hand, persistent soiling of the parts may be a consequence of anal operation or perineal laceration, or it may be caused by lymphopathia venereum, condylomata, prolapsing hemorrhoids, and pruritus ani.

Loss of weight may accompany chronic infectious disease of the anorectal region, including chronic ulcerative colitis and fistulous disease associated with lymphopathia venereum.

EXAMINATION ROUTINE

A routine examination need not be a complicated procedure. This should consist of inspection, palpation, and anoscopic observation with the patient in the right or left Sims's position, followed by sigmoidoscopic visual observation to the ten-inch (25 cm.) level. In covering the present subject, only the first three steps will be described in detail. The necessary clothing having been loosened or removed, the patient is placed in the left Sims's position and properly draped. The preliminary application of a topical anesthetic in water-soluble lubricant to the anal canal and low mucosal surfaces will not only facilitate in routine procedure, but will also permit a satisfactory study of the most painful lesions. This anesthetic may be applied by the nursing attendant several minutes before examination. The lower bowel surfaces are cleansed two hours before examination by use of saline enema until water returns clear.

Inspection of the buttocks and of the sacral and perineal areas should be done first, then examination of the anus carried out. This is facilitated by having the patient bear down, thus disclosing any abnormalities. When skin tags or external hemorrhoids are present they appear as a deformity on the anal margin and are indicative of anal disease. Hypertrophied skin folds suggest the occurrence of pruritus ani. Fissure-in-ano or painful ulcer is commonly accompanied by an edematous skin fold or formation of a sentinel pile. The presence of draining skin sinuses is indicative of a fistulous process which commonly follows the formation of an abscess. A condyloma is essentially an infected area of hyperplastic perianal skin. Sebaceous cysts usually cause little or no inconvenience. Pilonidal sinuses, usually situated in the sacrococcygeal region, are the result of an embryonic rest of epithelial tissue.

In palpation of the perineal tissues, infiltrating or cord-like processes extending into the anal margin may be felt. Extreme sphincter spasm is indicative of anal disease and may be the result of a focus of infection in crypts, ducts and glands. Contracture and stenosis of the anal canal and consequent alteration of bowel habit may be the ultimate result of persistent infection. Gentleness is a prerequisite in palpation and digital examination. The finger should be well lubricated. If pain, spasm or stenosis is present, palpation should be done with the small finger rather than the index finger. By comparison with the corresponding areas of the opposite side, small focal lesions may be more definitely identified. After the perianal, perineal and sacral areas have been palpated, the finger is approximated to the anus and the volar surface pressed against the sphincter ring. The bevel of the finger should follow the lateral wall of the anal canal. The finger is introduced downward and forward toward the umbilicus through the anal canal and sphincter ani. Bidigital examination (using the index finger and thumb) aids in outlining the anus, anal canal, and other areas in question. The lower Houston valves, as well as the seminal vesicles and the prostate gland in males and pelvic organs in females can be easily reached by the palpating finger. By having the patient bear down during palpation, it is possible to outline the rectosigmoid junction in many instances. Perianal abscess, thrombosis of the regional veins, ulcer depressions, or pathologic change in the perirectal glands of Gerota may also be identified. With infections of the perianal and perineal structures, palpation of the bilateral inguinal chain of nodes should be practiced.

Anoscopic examination under direct or indirect lighting is best accomplished by using an open-end anoscope with a removable obturator. This technique has been described elsewhere.[3] The anoscope, well lubricated, is introduced into the anal canal as gentle pressure with the beveled edge of the obturator is maintained against the lateral wall. The instrument should be directed forward toward the umbilicus through the sphincter ani. After the obturator is removed, observation is made of the regional mucous membrane surfaces, crypt line, and anal canal. This is best accomplished by having the patient strain and bear down, as in defecating, as each area is observed. Thus the presence of hypertrophied anal papillae, which may assume a polypoid appearance, can be noted. Localized gland, duct, and crypt infection is also verified under vis-

ual observation by expressing purulent exudate from the crypt orifice with the margin of the scope. The primary opening of a fistula also may be detected, and in many instances this impression may be confirmed by gentle probing. Fissure formation is observed more commonly in the posterior commissure. Fissure may be accompanied by edematous hypertrophy of an anal papilla on its upper margin as well as a sentinel pile at the anocutaneous line.

DIFFERENTIAL DIAGNOSIS

Even with the most ideal office examination, it is impossible to estimate fully the magnitude of all the infective processes involving the anorectal canal. The final analysis in every extremely painful condition is examination under regional anesthesia in the operating room where surgical treatment can be carried out as indicated.

Pruritus ani, a symptom-complex with many varied causative factors, presents findings in many instances in which local anal infective disease must be correlated. Funnel infection through ducts, glands, and contiguous tissues certainly bears indirect if not direct etiologic relationship in the spread of infection to epidermal structures. Soiling from prolapsing hemorrhoids, together with the attendant moisture and discharge from fissure formation, abscess, and fistulous disease may also cause pruritus.

Infectious pyodermia or hidradenitis suppurativa involving the perianal cutaneous surfaces is characterized by tunneling and sinus formation with the joining of superficial abscesses involving integumental areas where the apocrine sweat glands predominate. This process, however, does not involve the duct gland system.

Pilonidal cyst and sinuses, considered as a differential diagnostic problem, must be viewed with their possible association with abscess and fistula formation involving the posterior anal margin. A direct continuity occasionally exists between these two lesions in the same person.

Hemorrhoidal varicosities with attendant edema and swelling accompanying variable degrees of acute thrombosis at times is difficult clinically to differentiate from acute inflammatory disease with abscess formation. It is important that an exact diagnosis be established, under regional anesthesia if necessary, to prevent invasion and destruction of tissue from an unsuspected infective process.

THERAPEUTIC CONSIDERATIONS

The treatment of anal infection calls first of all for early, adequate and complete diagnostic evaluation. Simple, self-limited or superficial lesions only are amenable to office treatment; patients with other lesions should be hospitalized. Adequate relaxation, produced preferably by regional anesthesia consisting of low spinal or caudal-transacral block, permits the examining physician to determine the extent of spread of the infectious process.

Fissurectomy call for the surgical removal of the ulcer-bearing area including subcutaneous gland-bearing tissues, associated crypts and ducts, hypertrophic anal papillae together with associated varicosity, and sentinel pile formation external to the lesion with wide drainage onto the skin margin. Partial posterior sphincterotomy relieves sphincter spasm postoperatively. It is also the surgical treatment for contracture and stenosis accompanying chronic infection originating in crypt, duct, or gland. A counterpart of this disease, characterized by growth of fibrous replacement tissue (and in some centers called pectinosis) is merely a manifestation of infectious process. Muscle incision relieves hyperplasia or bar (Blaisdel's) formation of the superficial portion of the external sphincter ani.

In dealing with the treatment of abscess formation about the anorectal canal, it should be borne in mind that the longer a fulminating infection is allowed to exist, the greater the likelihood of attendant destruction and breakdown of tissue. As this may entail irreparable damage to muscle structure, the virtues of early surgical drainage are evident. Unfortunately, sedation, denver mud or poultice therapy is still the procedure of choice by many clinicians who prefer to wait for a pointing and spontaneous evacuation of purulent exudate, and others have hoped that injection of antibiotic agents would prevent the spread of the infectious process as well as remove its cause.

Early incision and drainage of an abscess in the anorectal region calls for T-shaped or elliptical incisions paralleling and cutting the muscle structures. This is followed by scalping of the abscess with wide saucerization and bevelling of skin edges. Breaking up of all loculi and dependant drainage are final requisites. This procedure essentially makes a complete fistula, producing the secondary or external opening to the diseased process. In certain instances it is feasible to remove the primary opening at the same time by doing a first stage or complete fistulectomy. Mucosal abscesses are preferably opened with a cautery, with bevelling of edges, excision of secondary fistulous processes and dependant drainage to the anal margin. Use of rubber tissue drainage and avoidance of gauze packing minimizes pain and is adequate if surgical draining has been complete. In all cases of proven fistulous abscess, as soon as infection has been allayed by incision and drainage the patient should be advised to have complete fistulectomy promptly.

Fistulous disease manifests itself in a varied pattern and is classified accordingly. The primary opening is usually associated with the opening or orifice of an anal crypt. A through-and-through communication from this primary opening externally, submucosally, or to another organ is a complete fistula. A blind tract ending subcutaneously or submucosally is an incomplete fistula or sinus. The process may be multiple, forming varied patterns with attending residual abscesses. Tuberculosis and malignancy may attend this chronic infectious process. Biopsy of any suspicious tissue is mandatory.

The treatment of fistula-in-ano is primarily surgical. This includes the removal of the entire diseased process consisting of primary and secondary openings and the communicating tracts. The crypt, duct and gland elements related to the primary opening and original spread of the disease should also be resected. As the chief complication of the surgical treatment of this disease is incontinence, sphincteric preservation and restoration are important factors. The type and extent of the fistulous disease may indicate the use of multiple stage procedures.

Wide surgical and dependent drainage is paramount. Enlarged papillae and adjacent hemorrhoidal varicosity must be removed to permit uniform healing. All sphincter muscle fibers must be cut at right angles to the line of cleavage. The placing of a seton about a muscle bundle so as to allow for the healing of large excavating wounds is a preliminary step to a secondary procedure with a second stage incision of the sphincter and removal of the seton. This permits the residual shallow groove to heal progressively.

1212 Wilshire Boulevard.

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Antihistamine in the Prevention of Serum Reaction Following Injection of Tetanus Antitoxin

A. Waxman, M.D., and H. Geshelin, M.D., *Los Angeles*

SUMMARY

Of 100 patients given tetanus antitoxin, 56 were given an antihistaminic drug in oral doses of 50 mg. daily for ten days following injection. The other 44 were not given antihistamine. The incidence of serum reaction in the former group was 3.6 per cent; in the latter, 20.4 per cent.

THE use of tetanus antitoxin in certain types of injuries has become almost as obligatory as the use of x-ray examination in cases of suspected bone injuries. Reports in the literature indicate that about 25 per cent of all patients receiving tetanus antitoxin have serum reaction of one kind or another, either early or late, generalized or local. All such reactions are annoying; some are serious enough to require hospitalization. The possibility that serum reaction might occur has resulted in an understandable reluctance on the part of some physicians to use tetanus antitoxin prophylactically.

A study was carried out to determine what effect, if any, the giving of antihistaminic drugs might have on the incidence of such reactions. The records of 100 patients who had received injections of tetanus antitoxin in the office were reviewed. All had received 5,000 units of tetanus antitoxin after negative reaction to a skin test for sensitivity to the material. Of the 100 patients, 56 had received, in addition, 50 mg. of Pyribenzamine® orally each day for ten days following the injection. Data on the incidence and severity of reactions in both groups are given in Table 1. As is indicated in the table, in no instance did reaction occur within 24 hours. This may be because routinely 0.3 cc. of epinephrine hydrochloride 1:1,000 was added to the antitoxin in the syringe.

Table 1.—*Incidence of Serum Reaction Following Tetanus Antitoxin Injections Among Patients Not Given Antihistaminic Drug Compared with Incidence Among Patients Who Were Given the Drug.*

44 patients not given antihistaminic drug:			
Character of Reaction	Immediate or Within 24 hours	Delayed	Per Cent
General	0	5*	
Local	0	4	
	0	9	20.4

56 patients given antihistaminic drug:			
Character of Reaction	Immediate or Within 24 hours	Delayed	Per Cent
General	0	0	
Local	0	2	
	0	2	3.6

*Reaction was severe in four cases; hospitalization was required in two.

810 South Spring Street.

The Organization and Operation of a Study of Diarrheal Disease in Fresno County

Wm. F. Stein, M.D., *Fresno;* M. Dorthy Beck and Arthur C. Hollister, Jr., M.D., *Berkeley,* and Earl Mortenson, *Fresno*

SUMMARY

The procedures used in the organization and operation of a special study on diarrheal diseases involving federal, state, and local agencies are outlined. The integration of such a project into a local routine program is discussed and the possible benefits derived by the various agencies are briefly evaluated.

APPLIED epidemiologic research has been carried on for many years by the State Department of Public Health, metropolitan health departments, the universities, and the United States Public Health Service. However, such work by federal, state, and university groups has usually been independent in nature because of the requirements of specialized personnel, time, equipment, working space, etc., as well as the difficulty of fitting these projects into routine local programs. The purpose of this report is to illustrate how and to what extent, both from an administrative and from an operational standpoint, a special project was integrated into the Fresno County Health Department program.

PROJECT PROPOSAL

For a period of at least five years previous to this study the infant mortality rate from diarrhea and enteritis was consistently higher in San Joaquin Valley counties than in the state as a whole and programs were generally directed toward this problem by the local health departments.

In the fall of 1949, the incidence of diarrheal diseases among migratory workers' families reached a climax. It was difficult to know the exact numbers affected, but a general measure is that during the summer and fall the hospitals were crowded with very young children sick with this disease. Through the local health departments and hospitals, specific and more detailed information became available which demonstrated the magnitude of the problem in morbidity and mortality, particularly among the infants.

When the urgency of the situation became apparent, various conferences were called, federal, state, and local agencies participating. Discussions were held not only on general health matters, but also on sanitary facilities, housing, nutrition, the fly problem, and related subjects. The need for a basic epidemiologic study of the diarrheal diseases in the Central Valley was recognized as fundamental from the recommendations proposed. As part of such a study, surveys on the domestic fly population would be included because flies are considered one of the problems in the transmission of these diseases.

Since the focus of the diarrheal diseases was located in the San Joaquin Valley, the first study was planned for that area. However, because of the magnitude of the problem, and, because this was to be a pilot study, the area surveyed was of necessity limited. Fresno County was selected, as it fulfilled the major requirements for such an investigation. There were available adequate sampling populations in migratory labor camps, in low socio-economic groups, and in substandard housing; the county was centrally located and was representative of the San Joaquin Valley.

The project was planned as a cooperative effort by the United States Public Health Service, the State Department of Public Health, and the County of Fresno. Each agency contributed personnel, facilities, and financial support in varying combinations. By joint agreement, Dr. James Watt* of the United States Public Health Service was appointed project head and the staff was organized under his direction. The plan was to operate the field survey for a period of six months (July-December 1950).

For convenience, the investigation was divided into two phases, the human epidemiologic study, and the fly population study.

The main objectives of the human study were:

1. To determine the incidence of diarrheal diseases in general population groups by using the method of single or repeated family unit histories in a selected sample.

2. To determine the prevalence of the most common etiologic agents causing diarrheal diseases—Shigella and Salmonella micro-organisms — by the method of obtaining rectal swab cultures on all children ten years of age and under in general population groups, without reference to clinical illness.

The main objective of the fly study was to determine, if possible, whether a correlation existed between the incidence of diarrheal diseases and the domestic fly population. Evaluation of the fly popu-

Health Officer, Fresno County, California (Stein); Senior Epidemiologist, California State Department of Public Health (Beck); Chief, Bureau of Acute Communicable Diseases, California State Department of Public Health (Hollister); Parasitologist, California State Department of Public Health (Mortenson).

The work here reported was a joint project of Fresno County Health Department, California State Department of Public Health, and the Federal Security Agency, Public Health Service, National Institutes of Health, Diarrheal Disease Control Service.

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*Medical Director in Charge, Dysentery Control Studies, National Institutes of Health.

lation was accomplished by taking grill counts of sample blocks to establish a population index, and by the use of the fly trap to determine the type of flies in the selected study areas.

A combined objective of the two phases was to plan and design an environmental sanitation survey form to effectively evaluate the sanitation as it might apply to the epidemiologic factors of diarrheal diseases and the production of flies.

ROLE OF THE LOCAL HEALTH DEPARTMENT

The Fresno County Health Department assisted in developing the specific project proposal as outlined. At first, it seemed an overwhelming task with a shortage of personnel, of funds, and of working space. However, with continued group discussions of the various interested agencies, the plans developed and the project began to unfold as a tangible working organization. The program was presented and explained to the Fresno County Board of Supervisors,† who consented to assume sponsorship. The special study became known as the Diarrheal Disease Project of the Fresno County Health Department. All financial transactions relative to the study were conducted by the county.

Following these preliminary steps, two storage rooms in the basement of the local health department building were converted into a field station. Some equipment was provided locally, and some obtained from the State Department of Public Health. The rest was purchased out of the special fund. Full-time personnel for the unit consisted of civil service employees from federal, state and county agencies, and temporary employees hired only for the project. The temporary employees were cleared through the county civil service, and emergency ratings with new titles were set up in specific cases. The services of other regular county employees—such as public health nurses, bacteriologists, and sanitarians—were contributed as time permitted from their routine duties. The utilization of local personnel on a study of this kind — applied epidemiologic research — as usually conducted by either federal or state agencies, is a definite departure in California.

The operation of the project, assisted by federal and state plans and personnel, was integrated into the County Health Department program in every possible way. The County Health Officer was consulted on all matters of local policy and he served as liaison between the head of the project and the board of supervisors. The public health nurses' assistance to the study cannot be overemphasized. First, in the survey work, they became part of the field team. In addition, each public health nurse selected a group of interested citizens in some one locality (town, housing project, or camp) in her district and developed them into a voluntary working unit. Such community health committees were an organization mechanism which had been used successfully in other public programs in Fresno County. They helped the public health nurse to carry out her part in the Special Diarrheal Disease Project. (It was planned that these committees would, in addition, be part of the local health department's long-range program to develop citizen awareness of problems and citizen participation in solving these problems.) Just as the individual public health nurses became part of the field team, so did the members of the community health committees under their guidance. In other words, extra personnel was provided and used effectively in a number of instances: undoubtedly, many more locations were surveyed because of this citizen participation.

To further integrate the activities into the local program, field visits were scheduled as far as possible to coincide with local health department functions. For example, immunization clinics were utilized whenever feasible—the public health nurse and the field team synchronizing the two operations to the best advantage. Child health conferences were routinely visited, and medical members of the Special Project worked with the public health nurses in obtaining rectal swab cultures from the children and family histories on those attending the conference.

A description of the scope of the survey operations will indicate to some extent the physical effort and work involved and the process of integration used in this investigation. The two phases of the epidemiologic study paralleled each other as far as was practical, although they were operated separately.

The human study included four types of population groups of various socio-economic levels. Briefly, these may be described as follows:

1. The child health conference groups were well-baby clinics, and partially represented a cross-section of the population of the town in which they were held. Thirteen of the 17 organized conferences were visited from one to three times each during the six-month period.

2. Housing project occupants were population groups living in government housing facilities. These were located in urban and suburban areas. The incomes of these people varied considerably, but the housing was quite modern and the units fairly comparable one to another.

3. "Fringe" areas of towns selected were suburban areas adjacent to city limits, having rural facilities such as well-water, privies, and sub-standard housing.

4. Labor camps were cabins, tents, or trailer space furnished by the farm owner and used for the housing of farm labor during the crop season.

These four population groups were from widely separated representative areas of Fresno County, including urban, suburban, and rural. The field teams travelled an average of 2,000 to 3,000 miles each month in carrying out the surveys in these scattered locations.

According to the primary objectives of the human study, family histories were to be obtained to determine the incidence of diarrheal disease. Single his-

†The City of Fresno contracts with Fresno County for Health Department services.

tories were taken on approximately 2,000 family units. In several selected areas, history-taking was repeated monthly to observe the seasonal trend; this represented approximately another 2,000 histories. Public health nurses and community health committees assisted in taking many of these histories. It is impossible to estimate the number of home visits required to carry out this objective because many additional visits were necessary to find the parents at home. Also, extra visits were made when information was incomplete.

The second main objective was to determine the prevalence of Shigella and Salmonella microorganisms. A total of 7,065 rectal swabs from children under 10 years of age were collected. Again, the public health nurse and her committee were of definite assistance. Because they were known in the community, many times they paved the way for admission into the home. Also, as an employee of the local health department, the public health nurse could act as liaison for the field team, and in many instances made the preliminary arrangements in the community or camp for the survey.

The division of laboratories of the Fresno County Health Department became an important adjunct to the laboratory phase of the project. The staff assisted in setting up the physical arrangements in the field laboratory and supervised the installation of certain equipment, and throughout the survey accepted the responsibility of its maintenance. The laboratory division further cooperated with the Special Project by screening all organisms isolated by the field laboratory which were suspected of belonging to the genus Shigella or Salmonella. Approximately 900 cultures were screened by biochemical and agglutination tests during the period of operation. The final definitive typing of the organisms was done at the State Division of Laboratories.

The scope of the domestic fly study included the evaluation of the fly population in three of the four economic divisions of the human study — housing projects, "fringe" areas of towns, and labor camps. Each area was sampled once a week from June to October, and thus a weekly fly population index was established for that period. The sanitarians of the Fresno County Health Department were most helpful in assisting the field team in setting up fly sampling areas: they also cooperated in developing the survey form used to evaluate objectively the existing sanitation in the labor camps.

The coordinating mechanism utilized in the Special Project included staff and general meetings, progress reports, and consultative service. Each week, the head of the Special Project attended the public health nurses' staff meeting. Plans and problems of the project as they related to this group were presented and discussed, and the schedule for survey activities for the following week was outlined. Any suggestions or changes for survey areas were made by the public health nurses at this time. Consultative service was given by the head of the project to the public health nurses in developing the community health committees. In fact, he and other members of his staff attended meetings and helped to interest the citizen groups in the formation and function of these community committees. Another means of further coordination was to keep all agencies currently informed on the survey activities. At the nurses' staff meetings, verbal progress reports were made. In addition, a written monthly report was submitted and each agency received a copy.

Consultative service was given to the chief sanitarian and his staff, and at group conferences basic sanitation as a control measure for diarrheal diseases was stressed repeatedly. Also discussed was the development of a sanitary survey code which might be applicable not only in the present investigation, but also for the long-range health department program in this field. In-service training was furnished by the group conducting the fly study; the sanitarians were given field training in the techniques used by the entomologic field team.

Meetings were held with the board of supervisors, the Interagency Committee,* and the San Joaquin Valley Health Officers' Association. These groups were apprised of the situation and of the progress of the investigation, and were informed regarding possible control measures. For general interest, some publicity on the operation of the project was released to the citizens of Fresno County through their newspapers and the radio.

EVALUATION

There is no doubt that each agency involved profited from the coordinated effort required to organize and operate the Diarrheal Disease Project. The exact benefits derived are difficult to evaluate, but appear to be twofold: First, the immediate gain of working as an integrated group of three agencies; second, the potential long-range effect on the general program of the local health department resulting from the multiple underlying factors of the specific diarrheal disease problem.

With regard to the immediate benefits referred to, state and federal agencies now have a greater appreciation of the possibilities of utilizing local health department personnel and facilities in their special area investigations. On the other hand, local health authorities should realize that applied epidemiologic research can be fitted into their routine programs. Each group expressed a feeling of satisfaction from this experience.

The immediate benefits which were gained during the operation of this Special Project were worthwhile, but of far greater importance are the potential long-range results which may develop. It is hoped that in the future, state and federal agencies will plan similar cooperative studies more or less following the pattern outlined in this report.

*The Interagency Committee is composed of: Fresno County Chapter of the American Red Cross, Agricultural Extension Service, County School Department, Fresno County Coordinating Council, Fresno General Hospital, Missionary agencies, Fresno County Tuberculosis Association, Central Valley Empire Association, and State Department of Employment.

At the local level, the health department has promulgated a program of continuous in-service training for the field staff, that they may better meet the needs of the agricultural workers. The community committees have been encouraged to help solve their own health problems. A number of the larger agricultural growers in Fresno County have been included in the work of these committees. Field conferences have been held with the growers and as their understanding of the problems increases, so in turn will the resources for the agricultural camps develop. Already, it has seemed necessary to provide health centers and classroom facilities in each of the larger camps. (Four of the ranch owners are now preparing such centers.) However, much more work is necessary at the local or community level, more contacts, continued interest, a better understanding for all groups involved, and an expanded educational program.

4225 Ventura Boulevard.

Note: The statistical results of the Special Study are incomplete at this time, but will be reported in detail later.

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The authors wish to express their appreciation to the entire staff of the Fresno County Health Department and specifically to the following persons for their assistance, advice, and untiring efforts in carrying out this project: Miss Winifred Erskine, Director of Public Health Nurses; Mr. Wilfrid C. Kennell, Director of Laboratories; Mr. Joseph Reich, Director of Sanitation.

Crushed Ice Packing in the Treatment of Burns

STEPHEN E. FLYNN, M.D., *Coronado*

APPLICATION of packs of crushed ice to damaged areas in the treatment of severely burned patients has many advantages medically, and in addition it is a method adaptable to administration by trained lay personnel if that should become necessary in the event of atomic attack or other such catastrophe.

The treatment was used as an emergency measure aboard a Navy vessel in wartime after supplies needed for conventional methods had been exhausted. Fifty patients were extensively burned in gasoline and other explosions during enemy attack. With materials on hand at the outset, standard methods were employed to overcome shock, relieve pain and prevent dehydration. Each patient was given frequent 0.03 gm. doses of morphine sulfate, oxygen by nasal catheter, and infusion of at least a pint of plasma per day. Normal saline solution and saline solution with 5 per cent glucose were given intravenously as indicated. The burned areas were wrapped in pressure bandages of vaseline gauze.

For the first two or three days after injury the patients appeared to do well, but in many cases pulmonary edema developed on the fourth day. In such instances the extremities swelled and hacking cough and irrationality developed. Some of the patients died and others were in critical condition.

In all cases of major burns, the vein in which plasma was given soon collapsed. It was necessary to cut down the vein for subsequent infusions, and in the course of the procedure the formation of large thrombi was noted. When a vein that had not been used for infusion for several days was cut down, many thrombi were found to be breaking loose. It was assumed that these thrombi were lodging in the alveoli of the lungs and causing pulmonary edema.

At the time of these observations, supplies of plasma were exhausted and infusions then were confined to saline or saline and glucose solutions. The condition of the patients improved.

Subsequently in the treatment of patients with severe burns, crushed ice was applied to the damaged areas. Shock and pain were immediately relieved and the patients had a sense of well-being. Glucose and water was given intravenously. Usually the chilling packs were kept in place for two or three days—the length of time depending upon the condition of the patient—to give opportunity for restoration of normal circulation. Use of crushed ice was cumbersome and improvisation was necessary in fitting it to the needs in each case, but there appeared to be other benefits beyond overcoming shock and relieving pain. Pulmonary edema was of lesser incidence. Loss of plasma was diminished, although not eliminated. It is probable that the absorption of dead blood cells and tissue cells was retarded and toxemia thereby reduced. Other probably tenable suppositions are that cold lowered the metabolic demands of the lesions, decreased the amount of necrosis, and tended to retard bacterial growth and secondary infection.

Aside from these factors, which in sum may be life-saving in cases of severe and extensive burns, cold may be considered as an effective method merely for relieving the pain of less serious burns. In the author's experience, the relief given by packing in crushed ice was superior to that obtained with morphine sulfate.

In any event, crushed ice packing is a method to be considered in these times when an atomic bomb attack could cause serious burns in so large a proportion of the population of an area that available physicians, using standard methods, could not cope with the problem. In such circumstances, early application of crushed ice by trained lay personnel might save lives.

1024 Isabella Avenue.

Proper Use of Antibiotics in Treatment of Acute Otitis Media

Miriam H. Rutherford, M.D., *Oakland*

SUMMARY

The problem of preventing loss of hearing following acute otitis media has been made more complex by the use of penicillin and other antibiotic agents which may apparently cure yet leave dangerous residual disease. The causes of loss of hearing must be recognized early if remedial treatment is to be effective. In children particularly, loss of hearing may go unnoticed for some time.

Physicians who treat otitis media should feel the responsibility not only of bringing an acutely ill child back to health but of preserving the function of the hearing mechanism. Careful examination of the ear after apparent subsidence of infection is mandatory. It is of the utmost importance to be able to recognize the ear drum in its normal state and its various pathological states and to be alert to the early signs of changes associated with loss of hearing. Antibiotics should not be expected to do more than help combat the acute infection in otitis media. Adequate follow-up demands strong suspicion of residual pathologic process in the ear. The prevention of loss of hearing still requires knowledge of the established clinical facts and therapeutic procedures and the application of this knowledge to treatment of acute infections of the middle ear.

In the past few years great strides have been made in the development and use of chemotherapeutic and antibiotic agents. In many respects these drugs have changed concepts of treatment of disease by otologists as well as by physicians in other fields. Enough time has elapsed to evaluate the results of at least one of the earliest of these drugs—penicillin.

Many physicians regard sulfa compounds and penicillin, especially the latter, as truly "miracle" drugs. They have discarded the time-consuming procedure of adequate history-taking and thorough physical examination of the patient in favor of indiscriminate administration of large amounts of penicillin. Such promiscuous use of the drug tends to mask the true, basic clinical facts and may camouflage irreversible or progressive disease states. "Shotgun" therapy with these new drugs cannot properly be substituted for sound diagnosis.

From the Department of Surgery, Division of Otorhinolaryngology, Stanford University School of Medicine, and the Department of Otorhinolaryngology, Children's Hospital of the East Bay.

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That penicillin is a powerful therapeutic agent is undeniable, but proper use of it requires that certain principles of therapy be followed. The drug is bacteriostatic at low concentrations and is bactericidal in high concentrations against a large variety of organisms. It is necessary to produce an optimal concentration of the drug at the site of infection and to maintain the concentration until the organisms have been eradicated. The desired result can be obtained only if dosage is sufficiently large and continued until complete recovery of the patient. Although now there is less tendency to underdose, many physicians still are prone to cease administration of the drug too soon. Even when these principles are observed, antimicrobial drugs cannot be substituted for drainage of a suppurative focus, because in such cases they are least effective due to their inability to penetrate the pus-filled cavity.

In the treatment of acute otitis media, penicillin and other antimicrobial agents unquestionably are of great value, but principally as adjuncts to established therapeutic procedures. In this disease indiscriminate use of such drugs often masks clinical manifestations and allows pathological processes to become irreversible. The course of treatment still should be guided by proper diagnosis based on careful history-taking and thorough examination of the patient—including the ears. In a small child, ill and frightened, this examination may be time-consuming and even unpleasant. Nevertheless, the ears should be gently and thoroughly cleansed of cerumen and debris so that the condition of the tympanic membrane may be observed. This may be elementary and obvious, but experience in the past year or so has shown that some physicians believe it no longer is necessary to see the ear drums "because a shot or two of penicillin will cure the ears anyway."

It is true that penicillin may reduce the fever and stop the pain but it will not necessarily bring the ear back to a normal state. In fact in many such cases the ears do not return to normal. Upon examination of the tympanic membrane following "cures" with penicillin, it may be observed to be dull, thickened and retracted. There may be retraction of Shrapnel's membrane which later could lead to cholesteatoma. There may be a change to chronic suppuration. There may be adhesions separating the attic from the lower tympanum, permitting the infectious process insidiously to continue for several months in the attic or mastoid space without previous clinical manifestations until epidural or perisinal abscess finally manifests itself. These are not theoretical possibilities—they are actually occurring. All otologists who work with children have observed such cases. Examples of each of the latter

two complications were observed recently. In one case epidural abscess occurred three months after an acute infection of the ear apparently had been successfully treated with penicillin; in the other, perisinus abscess developed four months after infection of the ear subsided with penicillin treatment. However, these are the relatively infrequent end results of insufficient treatment and observation. The commonest result is loss of hearing, which frequently is overlooked in children both by physicians and parents. Maintenance of the function of the ear —that of hearing—must not be forgotten in the treatment of ear infections.

In suppurative otitis media, incision of the tympanic membrane at the proper time is the best insurance against chronic suppuration or chronic adhesive processes leading to loss of hearing. The drainage of pus under pressure still is a surgical first principle. Neglect of this principle by the physician whose indiscriminate use of antibiotics has lulled him into a sense of safety may lead to adhesions in the middle ear, permanent retraction of the tympanic membrane or chronic perforations with subsequent loss of hearing.

The majority of middle ear infections which respond magically to one or two injections of penicillin are those which in years past responded to glycerin drops, heat and decongestants. Secretory or non-purulent otitis, observed frequently as a complication of the common cold, of viral infections of the respiratory tract, of hypertrophied adenoid tissue and of allergic rhinitis, may cause symptoms of pain and low-grade fever in children. Otitis media of this type is caused by obstruction of the eustachian tube, and responds to decongestants which restore aeration of the middle ear and permit drainage of the secretion. Much of the evidence of the effectiveness of penicillin in the treatment of otitis media is based on the false premise that otalgia means suppurative otitis media. As a matter of fact, the otalgia may be due to a reddened, retracted tympanic membrane and a vacuum in the middle ear or to an accumulation of non-suppurative transudate or exudate. It is well established that acute non-suppurative otitis media and most suppurative infections of the middle ear with bulging of the drum respond to myringotomy and treatment directed toward the underlying causes. After myringotomy the temperature drops, the otalgia soon ceases and in a few hours the child usually is comfortable and asleep. If penicillin is administered at the same time, the credit for this rapid improvement is given to the drug, whereas in practically all cases it is the result of releasing the pressure of fluid or pus in the middle ear.

Antibiotics are most valuable when used as adjuncts in those cases of otitis media in which the organism is virulent, the patient is febrile and the response to drainage, local cleansing and general measures is not satisfactory. In such cases the antibiotics used should be given in adequate doses and continued until the ear has returned to normal. This cannot be determined without adequate inspection of the ear drum during the period of convalescence. This, of course, requires that the physician know how to cleanse the canal and drum without trauma and be able by observation to determine the condition of the drum and middle ear at all stages of the disease. Frequent observation of the tympanic membrane is even more important when penicillin or other antibiotics are being administered than when simple myringotomy has been done without use of these drugs. If antibiotics are used, there are no warning symptoms of pain and fever which alert the physician to possible complications arising during the course of the disease. Critical observation of the ear is the only way of determining the more chronic and less dramatic changes which may result from acute otitis media and lead to loss of hearing which often is not discovered in children until several such attacks have occurred and irreversible changes are present in the drum or middle ear.

Rupture of the tympanic membrane may occur even when the patient is being given adequate antibiotic therapy. It is not uncommon for children who are being treated for pneumonia or other systemic disease to start having aural discharge, often without fever or much pain. This could be anticipated by daily observation of the ears at the same time as the general examination—but only if the examining physician is able to determine what process is going on in the middle ear. Such knowledge can be acquired only by repeated observation of ear drums, both normal and abnormal. Spontaneous rupture of the ear drum should be avoided if possible. Although this may seem obvious, there is a growing trend among pediatricians and general practitioners to say, "What does it matter if the drum ruptures?" It does matter, for although in some cases, fortunately, the rupture occurs early and at the optimal site—the postero-inferior quadrant where scarring will cause minimal loss of hearing — in others it may occur in Shrapnel's area, leading to chronic attic suppuration and later cholesteatoma, or marginally so that healing does not occur, or anteriorly where it may remain a chronic perforation through which mucous secretions from the eustachian tube are discharged. In any case rupture is caused by ischemic necrosis, a gradual tearing process with pus tunneling through the layers of tympanic membrane, which leads to greater scarring of the drum than a clean incision as in myringotomy. Before and during the occurrence of rupture, the pressure of pus in the middle ear is transmitted by way of the aditus to the mastoid air cells, causing inflammation and edema of the lining membrane. In most cases in which spontaneous rupture has occurred, drainage is inadequate so that, regardless of the site of rupture, incision of the tympanic membrane in the postero-inferior quadrant is desirable. A gush of pus following myringotomy will prove this point: and usually prompt subsidence of symptoms occurs.

Often if antibiotic therapy is discontinued too soon the drug acts merely as a bacteriostatic agent and symptoms may recur in five to 14 days. Such recurrences are frequently erroneously taken to be

new infections. Cases have been observed in which children have had recurring earaches every ten days or two weeks over a period of months, each time apparently being "cured" by a "shot" or two of penicillin. Such a prolonged state of infection obviously is damaging to the delicate hearing mechanism.

After all infection has subsided, the tympanic membrane should be observed to be pale, thin and in normal position. Hearing should have returned to normal. If there is any doubt of this after a few simple hearing tests have been made, an audiogram should be obtained. If hearing is below normal, attention should be directed toward possible causes. The commonest cause of conductive hearing loss in children, as well as the most frequent cause of repeated attacks of otitis media, is obstructive adenoid tissue. This is often complicated by allergic disease and sinus infection. Complete removal of the adenoid tissue, with special attention to obstructive tissue high in the vault and in the fossae of Rosenmuller, often will clear up repeated otitis media and return hearing to normal. In some instances, further procedures may be necessary — allergic sensitivity studies, irradiation of the nasopharynx, inflation of the eustachian tubes, or treatment of sinusitis. None of these measures will be of great value in restoring hearing if the condition has been neglected for so long that irreversible changes, such as chronic adhesive processes in the middle ear, thickening and retraction of the tympanic membrane or chronic suppuration, have occurred.

2929 Summit Street.

Discussion by Victor Goodhill, M.D., *Los Angeles*

I have long waited for someone to say so eloquently what Dr. Rutherford has stated in her important and excellent paper.

It is interesting to review the chronologic story of the treatment of acute otitis media from about 1936 to the present. During these 15 years a veritable therapeutic drama has occurred in the treatment of the patient with acute otitis media. Prior to the advent of the first chemotherapeutic drug, prontosil, prompt myringotomy and supportive therapy was a fairly adequate treatment. In spite of this, however, mastoiditis and its sequelae were not infrequent complications. The utilization of prontosil, followed later by sulfanilamide and other sulfonamides, decreased the incidence of complications. The further advent of penicillin decreased still further the dreaded complications of otitis media.

This change in therapy, however, created a rather startling attitude toward tried and true surgical principles. The necessity for the drainage of pus lost its importance to some physicians, and reliance upon sulfonamides and antibiotics alone became more and more widespread. This reliance was largely strengthened by the fact that many children showed such apparent quick response to non-surgical therapy. In effect, many pediatricians stated that myringotomy was now a useless and an unnecessary procedure and that otitis media could be completely controlled by medical means entirely, provided the drugs were used early and in proper dosage. Undoubtedly there was some truth to these statements, but experience has shown that the defiance of surgical principles is quite unsafe. As time goes on there is growing evidence of incomplete bacteriostasis and bactericidal activity of the antibiotics in otitis media. Complications are now occurring with greater frequency due to increased virulence of new generations of organisms and also to disregard of surgical principles in the conduct of temporal bone infections. As Dr. Rutherford has so ably emphasized, intracranial complications can and do occur in spite of antibiotics; recognition of them is infinitely more difficult, and treatment frequently too late, because of masking phenomena. The functional impedance of hearing produced by conduction deafness is becoming more common. Serous effusion of the tympanum occurs more frequently than ever before, probably because of incomplete resolution of the suppurative process, due to the effect of the antibiotic drugs.

One wonders whether there is therapeutic wisdom in withholding from the patient the innocuous and logical release of pus by myringotomy as compared to the administration of half a dozen injections of penicillin, plus innumerable expensive oral antibiotics, many of which produce gastrointestinal disturbances of major degree and allergic reactions that may be quite disabling. Is it not time for a sober reevaluation of therapeutic principles and surgical concepts in acute otitis media?

Giant Intracanalicular Fibroadenoma

With Report of Five Cases

Clyn Smith, Jr., M.D., *Monterey*, Robert J. Parsons, M.D., *Oakland*, and William M. Bogart, M.D., *Martinez*

SUMMARY

Five cases of giant intracanalicular fibroadenoma ("cystosarcoma phylloides") were observed at one hospital in a period of three years. In a search of the literature, additional reports of breast tumors of this kind, not included in previous reviews, were noted. As there is record of 229 cases, it would appear that this rapidly growing benign tumor should be kept in mind in the diagnosis of masses in the breast.

If removal is incomplete, there may be recurrence. Simple mastectomy is the treatment of choice. Radical mastectomy should be avoided.

JOHANNES MULLER is credited with classifying and assigning the name cystosarcoma phylloides to a non-malignant tumor of the breast which frequently grows rapidly to large size. Although the term assigned by Muller has been used for over a century, the description "giant intracanalicular fibroadenoma" is also used and would seem to be more accurate. The tumor has been reported by various other names, an excellent list of which was compiled by Owens and Adams. Recently the authors have observed five cases, which are reported in this presentation.

Giant intracanalicular fibroadenoma usually is observed as a freely movable mass replacing most of the normal breast tissue, with no retraction of the nipple and no axillary lymph node enlargement. Changes in the skin over the mass are rare. They occur only when local necrosis and ulceration are caused by the large size of the growth. The tumor is characterized by rapid and bulky enlargement, sometimes after a long period of little or no growth. Histologically it has many of the features of sarcoma, but it does not metastasize. Although infrequent cases have apparently been of a malignant variant,[6, 34] the neoplasm is considered to be benign. It is generally accepted that simple mastectomy is the treatment of choice.

LITERATURE

Lee and Pack,[20, 21] reviewing the literature in 1931, collected reports of 105 cases and reported six cases they had observed. Owens and Adams[29] collected reports of 12 cases published between 1931 and 1941 and themselves reported a case. A number of cases have been reported since 1941. In addition, in a search of the literature, reports of a number of cases not included in previous reviews were noted: Six cases reported by Greenough and Simon[15] in 1911, four by Geist and Wilensky[13] in 1915, one by Martin[26] in 1933, two by Smith in 1935, one by Crile[8] in 1938, and one by Hopkins[18] in 1940.

White[34] reported a case in which a 34-year-old woman died with metastases from a sarcomatous breast tumor which he concluded was a malignant variant of giant intracanalicular fibroadenoma. Hill and Stout[16] reviewed in detail ten cases observed at Columbia University School of Medicine between 1911 and 1940. They used the term "adenofibrosarcoma, intracanalicular type." Althabe and Beruti[3] reported a case in which a 45-year-old woman had a 1,800-gm. tumor of the left breast. Hinterberger[17] reported a case of giant intracanalicular fibroadenoma in a 39-year-old woman. In 1943 Cooper and Ackerman[6] reviewed the history of three patients with the disease. One of these had several recurrences and axillary metastases. In that case the growth was considered malignant.

Fox and co-workers[11] treated a 15-year-old unmarried girl with a breast tumor "the size of a baby's head." They also reported the case of a married woman, 50 years of age, with giant intracanalicular fibroadenoma "the size of a large orange." Marano[25] reported upon a 28-year-old woman with "myxoma of the breast." (It is assumed the lesion was giant intracanalicular fibroadenoma.)

Adair and Herrmann,[1] in a discussion of sarcoma of the breast, mentioned 45 cases of giant intracanalicular tumor observed between 1926 and 1944 at Memorial Hospital, New York. Assuming that this included the six cases originally reported by Lee and Pack,[21] then this represents 39 additional cases to be added to the total.

Aiken[2] reported a case of a 68-year-old woman with a tumor weighing 2,370 gm. He used the term "Brodie's disease of the breast." (Giant intracanalicular fibroadenoma was described in the English literature by Sir Benjamin Brodie[4] in 1840, and his name is occasionally still used in connection with it.)

Montenegro and Marcondes[27] reported a case of giant intracanalicular fibroadenoma in the South American literature. Jones[19] mentioned seven cases observed by him. Llewellyn[22] reviewed the case of a

From the Departments of Surgery and Pathology of the Highland-Alameda County Hospital, Oakland.

78-year-old woman with a "giant adenosarcoma" weighing 4,650 gm. — undoubtedly a giant intracanalicular fibroadenoma. Clarke[5] treated a 52-year-old woman with a 10-pound tumor of the breast. The patient also had a toxic adenoma of the thyroid gland. Walsh and Warren[33] reported a case in which a 47-year-old woman had a giant intracanalicular fibroadenoma 14 cm. in diameter. Gerwig[12] reported removal of a 7,830-gm. tumor from the breast of a Negro woman. Mannix and Wildnauer[24] presented a case in which a 29-year-old woman had a tumor of the left breast that weighed 4,785 gm. Ulceration through the skin occurred. In the right breast were three nodules which also proved to be giant intracanalicular fibroadenoma. McDonald and Harrington[23] summarized 13 cases observed at the Mayo Clinic between 1904 and 1943.

In all, 224 cases of breast neoplasm of this type have been reported to date. The authors have observed five additional cases.

CASE REPORTS

Case 1: A 33-year-old Negro woman was admitted to hospital March 2, 1949, with productive cough and enlargement of the left breast. The patient said that fever and productive cough had been present for four months and that in that time body weight had decreased 20 pounds. A small lump in the left breast had been noted about one year previously. It remained unchanged for about six months, then began to grow rapidly. The patient had had seven pregnancies, four terminated by abortion and two by stillbirth; there was one living child, 17 months of age, which the patient had nursed.

The left breast was firm and enlarged to 12x15x15 cm. In an x-ray film of the chest a pulmonary cavity involving almost all the left upper hemithorax was observed, and there was also some infiltration of the right central lung field. The sputum contained many acid-fast bacilli. A diagnosis of pulmonary tuberculosis was made. Pneumoperitoneum was carried out and streptomycin was administered. The question of tuberculous involvement of the left breast was considered in the differential diagnosis of the tumor.

On March 15, 1949, simple mastectomy was done with local anesthesia. A part of the pathological report follows:

The specimen consisted of an ovoid mass of firm, rubbery, nodular tissue, measuring 14x11x6 cm. (Figure 2). On the cut surface numerous translucent nodules of pale yellowish tissue, measuring from 2 to 5 cm. in diameter, separated by very thin fibrous septa, were observed. There was an occasional small cystic cleft containing clear, pale green, gelatinous material. In histological sections the basic pattern of intracanalicular adenofibroma was observed (Figure 3). There had been no recurrence of the growth at the time of this report.

Case 2: A 32-year-old unmarried nulliparous Negro woman was admitted to hospital because of an irregular, enlarged uterus and a mass in the left breast. A small lump had been present in the left breast for three years, but more rapid enlargement of the mass had been noted during the preceding six months.

Two of the patient's sisters had had uterine "fibroids" removed, each at the patient's present age. The patient had had rheumatic fever at the age of 10 and had had occasional exacerbations since.

Upon physical examination a systolic mitral murmur was noted. There was a firm, movable 8x6x5 cm. mass occupying the upper inner quadrant of the left breast. In the lower abdomen was an irregular movable mass the size of a fetus at six months. The following diagnoses were made: (1) rheumatic heart disease, (2) probable fibroadenoma of the left breast, (3) leiomyomata of the uterus.

On April 8, 1949, the mass in the left breast was removed. In a frozen section it was observed to be giant intracanalicular fibroadenoma (Figures 4 and 5).

A large leiomyomatous uterus was removed in total hysterectomy a week later. Recovery from both operations was uneventful.

Case 3: A 51-year-old married white woman was admitted to hospital August 11, 1949. She said she had had a "benign

Figure 1 (Case 1).—Bulky tumor of the left breast with no evidence of nipple retraction or of "orange peel" skin.

Figure 2.—Cut surface of tumor in Case 1. Note the lobular structure in which, grossly, there is no evidence of invasive growth.

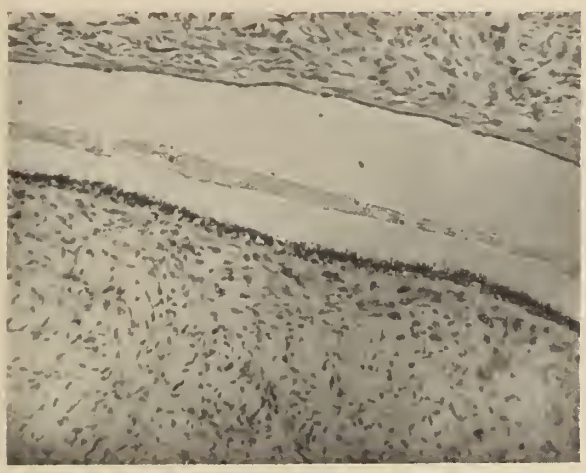

Figure 3 (Case 1).—At the lower portion of the picture is the edge of an intracanalicular mass. The myxomatous character is easily seen.

Figure 4 (Case 2).—The serrated margin of the papillomatous growth in a large cystic duct. The resemblance to the edge of a leaf has given the tumor one of its names—phylloides, meaning "leaf-like."

lump removed from the left breast" in 1945. About a year later the patient noted recurrence of a small mass which continued to enlarge during the ensuing three years. She had been married for 32 years and had two daughters, ages 31 and 15, living and in good health.

There was a 10x7 cm. mass in the left breast. Axillary lymph nodes were not palpable.

A preoperative impression of giant intracanalicular fibroadenoma was recorded by a member of the staff, and simple mastectomy was carried out when a biopsy specimen examined in frozen section confirmed the diagnosis. The gross specimen and paraffin sections were typical of giant intracanalicular fibroadenoma.

Case 4: A 56-year-old Portuguese widow was admitted on March 31, 1946, with history of progressive enlargement of a mass in the left breast over a period of two years.

The mass, the size of a small orange, was firm and freely movable. No axillary lymph nodes were palpable.

On April 4 a biopsy specimen was removed. Examination of a frozen section strongly indicated the tumor was malignant, and left radical mastectomy was done. In later examination of a paraffin section, the structure was observed to be typical of giant intracanalicular fibroadenoma, for which simple mastectomy would have sufficed. There has been no

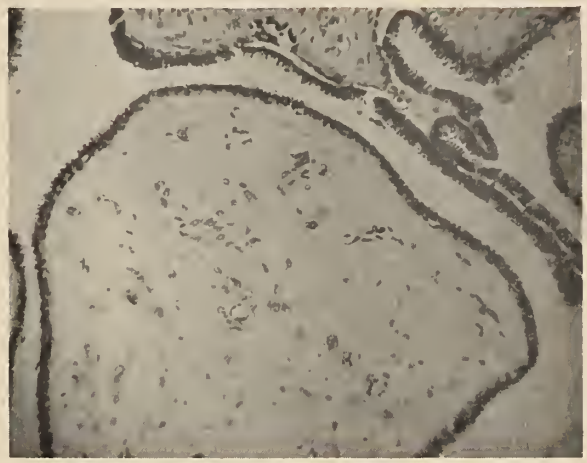

Figure 5 (Case 2).—Papillomatous growths into a cystic duct. Large bizarre nuclei are visible in the fibrous stroma.

evidence of recurrence, but the patient has had some swelling of the left arm since the operation.

Case 5: A 47-year-old single white woman was admitted to the hospital December 10, 1949. A benign tumor diagnosed as adenofibroma had been removed from the left breast at another hospital in 1940.

Five weeks before the present entry the patient had noted in the left breast a small mass which rapidly increased in size during the two weeks immediately prior to entry.

Upon physical examination the left breast was observed to be replaced by a firm, rounded mass, approximately 10 cm. in diameter, which was not fixed either to the skin or to the wall of the chest. Axillary lymph nodes were not palpable.

A preoperative diagnosis of giant intracanalicular fibroadenoma was made. After the diagnosis was confirmed in examination of a frozen section, simple mastectomy was done. The wound healed rapidly and there has been no evidence of recurrence.

CONCLUSION

As 229 cases of giant intracanalicular fibroadenoma, including five cases in this presentation, have been reported in the literature, it would appear that breast tumors of this type are more common than was previously assumed. In diagnosis of masses in the breast this rapidly growing benign tumor should be kept in mind. Since incomplete removal may result in a recurrence, simple mastectomy would appear to be the treatment of choice. Radical mastectomy should not be done.

Cass Street at Carmelita Avenue.

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CASE REPORTS

Teratoma of the Ovary in a Sixteen-Month-Old Child
Osteochondritis Dissecans of the Supratrochlear Septum

Teratoma of the Ovary in a Sixteen-Month-Old Child

A. Gilman, M.D., J. Smith, M.D., I. Puziss, M.D., and L. Karp, M.D., *San Francisco*

A CASE of teratoma of the ovary in the youngest patient of record to have such a lesion was reported by Garrett[2] in 1950. The patient was 20 months of age and the presence of the tumor was noted in a routine examination. Up to that time the youngest patient in a reported case of teratoma of the ovary was three years of age. The case was reported by Harris[3] in 1917. The youngest patient with this lesion reported by Ladd and Gross[4] was six years of age. In the British literature[1] there are reports of cases at the age of four and six years. Also reported was twisted ovarian cyst in a two-year-old child, but without final pathological diagnosis.

Tumors of the ovaries in children can occur at any age, but are most common between the ages of 10 and 15 years. In the case here reported the patient was 16 months of age.

CASE REPORT

A 16-month-old white female was admitted to the pediatric service of Mount Zion Hospital August 7, 1949, because of abdominal pain of 24 hours' duration. From the history obtained from the mother it appeared that the child had been well until the afternoon of the day before entry, when she was noted to be drowsy and lethargic. About 9 p.m. the child cried and vomited. Upon examination by a physician a tender mass filling the right side of the abdomen was palpated. The child did not appear acutely ill. An enema was given. The fluid subsequently discharged contained no feces and there was no evidence of blood.

The next morning the child appeared to feel well. She ate and retained her usual breakfast. By early afternoon she was fretful and had a temperature (rectal) of 103° F. She was then admitted to the hospital.

When examined upon admission the patient did not appear to be acutely ill. The rectal temperature was 103.6° F. The pulse rate was 90 per minute. A firm, tender mass, dull to percussion, filled the entire right side of the abdomen and extended up into the epigastrium. No abnormality was noted in a rectal examination.

In x-ray films of the abdomen a mass in the right side, displacing the bowel to the left, was observed, and there was moderate distention of the small bowel. In barium enema studies the cecum was not visualized, but there was a small amount of gas in the cecum and ascending colon, which were displaced to the left by the mass. The films were suggestive of intra-abdominal fluid on the right side, and an irregular density resembling calcification was present in the upper part of the mass.

Leukocytes in the blood numbered 14,600 per cu. mm.—64 per cent polymorphonuclear cells, 2 per cent monocytes, and 34 per cent lymphocytes; 18 per cent of the total were non-filamented forms. The hemoglobin content of the blood was 12 gm. per 100 cc. The urine was normal except for a trace of acetone.

Exploratory laparotomy was carried out through a long right rectus incision. A 9.5x8x8 cm. red-purple cystic tumor with several hard nodular areas filled the right side of the abdomen, and the bowel was pushed to the left. The tumor grew from the right ovary, and the pedicle and the fallopian tube were twisted 180° counterclockwise, strangulating the tumor and the tube. The tube appeared gangrenous. After the pedicle and tube had been untwisted, it was felt necessary to remove the tube and the mass together.

The postoperative course was uneventful and the patient was discharged from the hospital on the ninth postoperative day.

PATHOLOGICAL REPORT

Macroscopic examination: The specimen was a lobulated bosselated spheroidal mass 9.5x8x8 cm. The surface was smooth, purplish-grey and slightly dulled. A tube approximately 6 cm. long was stretched out along a pedicle that was 4 cm. long. Sections were extremely cellular with alternating zones of hemorrhage and necrosis. The cellular parts were soft, and varied in color from pink to gray. There were some zones of calcification scattered somewhat irregularly throughout but generally in the capsule. Most of the cystic areas were 2 to 3 cm. in diameter. No invasion of the capsule was observed.

Microscopic examination (See Figure 1): In sections of the capsule of the tumor laminated layers of fibrous tissue separated by a considerable amount of blood were observed. In a section through the pedicle and tube there was a loose fibrous stroma in which there was much blood. This extensive hemorrhage involved the tube, which was otherwise normal. The tumor was adherent to the cyst wall, and at no place in the sections was there evidence of invasion through the wall. In the tumor there was a wide variety of cells, all of them quite adult in configuration and structure. The most common tissue in this teratomatous tumor was brain tissue, represented by a loose formation of glial tissues with large dilated and congested blood vessels and a diffuse scattering of leukocytes and lymphocytes. In some places the tissue was necrotic. Associated with the brain tissue and scattered irregularly throughout were many structures that resembled respiratory tract, particularly trachea. The arrangement of epithelium, smooth muscle, and cartilage was quite striking. There were large cystic zones lined by stratified squamous epithelium, and beneath the epithelium there were epidermal structures including hair follicles and glands. In a few places the respiratory epithelium of the pseudo-tracheal structures

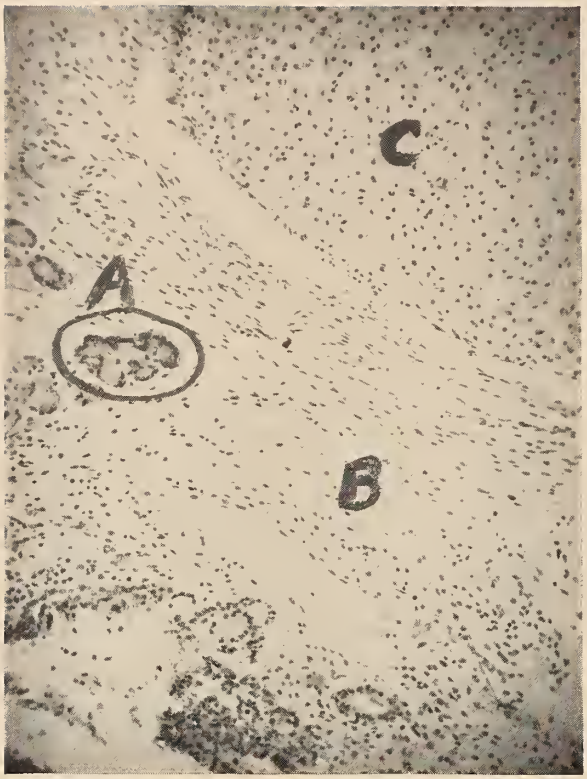

Figure 1.—Section of specimen. *A*—Primitive respiratory epithelium. *B*—Nerve tissue, glial in nature. *C*—Cartilage.

was necrotic and inflamed. In a few regions beneath the stratified squamous epithelium there were zones of fat adjacent to the glial substance. Some poorly formed pulmonary tissue was present. There was no evidence of neoplastic alteration of any of these tissues.

Pathologic diagnosis: Ovarian teratoma composed of adult tissues and showing early acute hemorrhagic necrosis.

DISCUSSION

In this case, rather typical of twisted ovarian cyst, a preoperative diagnosis of dermoid or teratomatous cyst was made with the aid of x-ray studies. Before the x-ray examination was carried out, a diagnosis of intussusception was considered. Had the fairly common occurrence of twisting of the mass on its pedicle not occurred, the presence of the tumor might have gone unrecognized for many months.

SUMMARY

A case of teratoma of the ovary in a 16-month-old child is reported. The patient is believed to be the youngest of record to have the lesion.

Mount Zion Hospital.

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Osteochondritis Dissecans of the Supratrochlear Septum

Charles A. Rowe, M.D., *Oakland*

In the five years since Morton and Crysler[4] first described osteochondritis dissecans of the supratrochlear septum and reported six cases, several additional cases have been reported.[1, 2, 3, 5]

A review of the reports indicates that the lesion usually occurs in young persons, more often in the knee than in other joints, and that more males than females are affected. It is generally agreed that the lesion starts with trauma which is followed by a necrotic process in which a bony fragment separates beneath articular cartilage.[1, 3, 4] With regard specifically to such lesions in the olecranon fossa, it is believed by some investigators[1, 4] that the fragment arises from within the supratrochlear septum. Ross,[5] on the other hand, expressed the opinion that the process originates in some other part of the elbow joint and that the fragment, migrating, becomes wedged in the olecranon fossa. Observations in the case here reported seem to support Ross's opinion.

REPORT OF A CASE

A 19-year-old United States Marine injured the right elbow slightly while in Okinawa in January 1947. No specific medical treatment was given. During the next several months, there was dull aching in the right elbow joint, with restriction of flexion and extension.

Upon physical examination when the patient was first observed in August 1947 at the U. S. Naval Hospital, Guam, the right elbow lacked 20 degrees of full extension and 10 degrees of complete flexion. The patient complained of dull aching within the olecranon fossa. In roentgen studies a sclerotic ovoid free fragment of bone occupying the supratrochlear septum of the right humerus was observed. The fragment, measured in projected dimension, was 10 by 15 mm. in the anterior-posterior film and 15 by 15 mm. in the lateral film. It was apparent that there was interference with full flexion and extension.

On Sept. 8, 1947, arthrotomy of the right elbow joint was carried out. A longitudinal incision three inches in length was made across the posterior lateral aspect of the elbow. The triceps tendon was reflected medially, the elbow joint was entered and the olecranon fossa exposed. A free osteochondritic body 1.5 cm. in diameter was removed. In careful examination of the articular contour of the olecranon fossa, nothing which would indicate the origin of the osteochondritic body was observed. The operative site was irrigated with sterile water and the wound was closed in layers with cotton sutures.

Figure 1.—*Upper left*—Osteochondritic body observed in anterior-posterior film. *Upper right*—Osteochondritic body in lateral view. *Lower*—Corresponding films after operation.

The postoperative course was uneventful and the patient was discharged to full duty on Sept. 26, 1947. In roentgenograms taken a month later the joint appeared to be normal. When last observed several months later the patient had a full range of motion of the right elbow without discomfort.

SUMMARY

A case of osteochondritis dissecans of the olecranon fossa is reported.

Observations at operation indicated that the process occurred elsewhere in the elbow and by migration lodged and hypertrophied within the fossa.

Surgical intervention with removal of the loose body offers the best results for this condition.

3400 Webster Street.

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EDITORIAL

Officially Yours

This issue of CALIFORNIA MEDICINE carries the transcript of the annual meeting of the House of Delegates of the California Medical Association. These proceedings are printed in full, rather than in condensed version, so that every member of the Association may read for himself just what proposals were made and what actions taken by the official policy-making body of the C.M.A.

Several sections of this transcript are of more than ordinary interest to all physicians and study of them is recommended. Among these are the statement of Dr. John W. Cline, a Californian who is now serving as president of the American Medical Association. Dr. Cline condensed into a few minutes the entire philosophy of the American Medical Association as a body devoted to public service. At the same time, he pointed to the role of every physician in representing the medical profession to the public and especially to those bodies and organizations which stand shoulder to shoulder with medicine in fighting for the preservation of the American system of competitive enterprise.

Another address of unusual interest is that of Dr. Dwight H. Murray, legislative chairman of the C.M.A. and of the A.M.A. and now serving as chairman of the A.M.A. Board of Trustees. Dr. Murray, with the able assistance of Mr. Ben H. Read, executive secretary of the Public Health League of California, gave a full account of the legislative activities of the 1951 California State Legislature. Every physician should read this story as a means of orienting himself in the legislative process and the need for legislative representation for medicine.

In a different vein but equally interesting is the address to the House of Delegates by William T. Bender, son of a physician and a senior medical student at University of California. Mr. Bender, who has been active in organizing a student chapter of the American Medical Association at his school, discussed the attitudes and philosophies of his fellow students and detailed the aims which some of their leaders have in developing active chapters of the Student A.M.A. in the medical schools of the state. His comments were startling and refreshing, and they are decidedly worth reading and heeding.

In addition to these formal presentations, the House of Delegates proceedings carry the discussion on the new Constitution and By-Laws, which will be printed in full in next month's issue. Every member should be familiar with these basic documents which govern his organization. Similarly, every member should familiarize himself with the annual budget as adopted by the House of Delegates. This shows where his money goes and for what purpose.

The California Medical Association is your own organization. Its annual sessions provide the opportunity for the transaction of business and the adoption of official policies. Each year at this time there is a chance for every member to review the official actions of this duly elected official body and to determine whether or not these actions, taken in the democratic process, represent the thinking of himself and his colleagues. If so, the member has been truly represented in policy-making; if not, the member may want to consider a different representation in future meetings. In any event, the entire report of the House of Delegates is here for perusal. May it shed light on the activities of the Association for those not fortunate enough to attend the annual session.

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C.M.A. House of Delegates Proceedings

SUNDAY AFTERNOON SESSION
MAY 13, 1951

The 48th Annual Session of the House of Delegates of the California Medical Association was held in the Biltmore Hotel, Los Angeles, California, May 13 to 16, 1951.

The Sunday afternoon session was held in the Music Room of the Biltmore Hotel, and was called to order at 1:30 p.m. by Speaker Lewis A. Alesen, who presided.

SPEAKER ALESEN: The House of Delegates will please come to order.

Dr. Morrison of Ventura, chairman of the Credentials Committee, is recognized.

Dr. Morrison, will you please step forward with your report?

REPORT OF COMMITTEE ON CREDENTIALS

DR. A. A. MORRISON: Mr. Chairman, we have 178 delegates seated, which constitutes a quorum.

I have here a written list of those delegates who have signed the Loyalty Oath.

SPEAKER ALESEN: Thank you.

It appearing that there is a quorum, I now declare this meeting of the House of Delegates of the California Medical Association duly constituted and open for business.

Mr. Secretary, will you proceed to call the roll.

. . . Roll call. . . .

SPEAKER ALESEN: The following committees have been appointed:

Committee on Credentials: A. A. Morrison, Ventura County, chairman; C. Meredith Guernsey, Butte County; Frederick Powers Heald, Imperial County.

Reference committee on the reports of officers, the Council and standing and special committees (Reference Committee No. 1): J. Lafe Ludwig, Los Angeles County, chairman; J. Needham Martin, San Bernardino County; James Graeser, Alameda-Contra Costa County.

Reference committee on finance, to review the reports of the Secretary-Treasurer and the Executive Secretary, and to study and make recommendations to the House of Delegates on the budget submitted by the Council and the amount of dues for the ensuing year (Reference Committee No. 2): Stanley Truman, Alameda-Contra Costa County, chairman; G. Wendell Olson, Orange County; Leslie B. Magoon, Santa Clara County.

Reference committee on resolutions, amendments to the Constitution and By-Laws, and new and miscellaneous business (Reference Committee No. 3): Lyle G. Craig, Los Angeles County, chairman; Henry Gibbons III, San Francisco County; H. Clifford Loos, Los Angeles County.

A word of explanation is in order about Reference Committee No. 3.

Our good friend, Dr. Wesley Smith, was selected to be chairman of this Reference Committee No. 3. Dr. Smith has had a serious operation and has been delayed a bit in his convalescence. He expected to come to this meeting even as late as Friday, when he called the Speaker to tell me he was ill and couldn't be here.

We want you to know Dr. Smith was a tireless worker on this committee last year, and we miss him very much. It was at his suggestion that Dr. Clifford Loos was selected to fill his place. As you know, Dr. Loos did some yeoman's work on this committee last year. I am sure the House of Delegates is very happy to have him.

Reference committee on executive session, to consider business brought before the House of Delegates in executive session (Reference Committee No. 4): J. P. Sampson, Los Angeles County, chairman; George Pimentel, Merced County; S. Condit Glasgow, Monterey County.

Does the House approve the appointment of these committees?

. . . There were no objections. . . .

SPEAKER ALESEN: Vice-Speaker Charnock announces that all the alternates and extra delegates have signed the delegate's card. We, therefore, are in business and ready to proceed.

At this time Dr. R. O. Bullis, president of the Los Angeles County Medical Association, would like to make an announcement. Dr. Bullis!

DR. R. O. BULLIS (Los Angeles County): Mr. Speaker, I would like to take this opportunity to announce to the House of Delegates that due to facts

uncontrolled by the American Medical Association it will be impossible to hold the interim meeting in Houston, Texas, and that Los Angeles, California, has been selected as the Interim Session meeting place in December. (Applause.)

SPEAKER ALESEN: At this time the next item of business before you is the vote on the proposed new Constitution for the California Medical Association.

The chair thinks it in order to give just a few words of history in order to explain why certain procedures have been adopted to facilitate and expedite the action on this document.

As you recall, in 1947 a special committee was appointed by order of this house to study the old Constitution and By-Laws and propose new documents if it saw fit. That committee was a 15-man committee under the chairmanship of Dr. Sam McClendon. That committee worked well and produced a document which it said was not complete at the 1948 session, and at the request of the committee it was discharged and a smaller committee of five, under the chairmanship of Dr. McClendon, again brought in the document at the 1949 session.

At that time the document was admitted and it lay on the table from 1949 to 1950.

In order to obtain the consensus of the House on the adoption, or for or against the proposed constitution at that time, Reference Committee No. 3 held a special pre-convention hearing in San Diego prior to the 1950 meeting. They sensed at that time that the opinion of the House was against the adoption of the document as it then lay on the table.

Therefore, they at that time brought in a new proposed document which attempted to reflect the consensus as it had been determined by the committee's hearings on the day previous.

Dr. Loos was chairman of Reference Committee No. 3. He introduced that document in the first meeting of the 1950 session on the Sunday evening meeting, and he announced that there would be an opportunity to add amendments to it at the Tuesday, or second, meeting. This is in accordance with Robert's Rules of Order, and also with the provisions of our own constitution, which require that a proposed constitutional amendment must lie on the table for one year before it can be voted upon.

As a matter of fact, there were introduced two amendments to the document, now lying upon the table, by Dr. J. E. Young of Fresno.

Reference Committee No. 3 also held a pre-convention hearing yesterday and they spent a lot of time on it, and a number of you people were present at that hearing. They have something to report for you at this time.

The chair recognizes Dr. Lyle Craig, chairman of Reference Committee No. 3.

REPORT OF REFERENCE COMMITTEE No. 3

DR. LYLE G. CRAIG: Mr. Speaker and members of the House of Delegates: Your Reference Committee No. 3 has held hearings on the proposed constitution as presented to the House of Delegates in 1950 and at present lying on the table. It is the result of four years of study by several committees and represents a considerable improvement on the existing constitution. Its chief advantage lies in the fact that it is a more flexible instrument than the present constitution, which contains a great many details which have been omitted from the proposed new constitution and which will be placed in the by-laws, where they can be readily changed at the will of the House of Delegates during any session without the delay incident to amendment of the constitution.

The adoption of this constitution will require new by-laws, which the committee is prepared to present immediately if this constitution is adopted, and the new by-laws so presented will have to lie on the table for 24 hours.

Therefore, Mr. Speaker, your committee recommends the adoption of this constitution, and I so move.

SPEAKER ALESEN: Thank you, Mr. Chairman.

Inasmuch as our constitution specifically provides for a vote by the membership and not just on the report of the committee, we merely accept your report as recommendatory.

At this time, members of the House of Delegates, it is in order to debate the adoption of the proposed constitution as it now lies upon the table. Does any delegate wish to discuss the proposed constitution, either for or against its adoption?

DR. E. T. REMMEN (Los Angeles County): Mr. Speaker, members of the House: I was a member of the first committee, the large committee which worked on the constitution. I think that on the whole the constitution as it is before us tonight is a very great improvement over the old constitution, which is old and is a hodge-podge of amendments and patches which have taken place over a 20- or 25-year period. There are three or four little points which may be debatable, but it would be impossible to adopt any constitution as a whole which met with the approval of everyone.

Some of us who were on those earlier committees think that three or four points should be debated, not tonight, but that amendments should be introduced at this time to lie over; amendments dealing with such matters as the exact composition, perhaps, of the House of Delegates, of the Council, of financial controls, and an amendment to the by-laws dealing with life memberships. But those can be taken up next year after thinking about them a year, and either accepted or rejected as the House in its wisdom and the thinking about the matter may decide. It is merely a matter of administrative policy and what is soundest.

So, I shall later introduce those amendments to lie over for a year, and then next year you may either adopt one or all of them, or reject them, as seems best. But I urge that the constitution as it now stands be adopted.

SPEAKER ALESEN: Is there further discussion upon the proposed constitution?

. . . The question was called for. . . .

SPEAKER ALESEN: If not, do you wish to vote?

. . . The question was called for. . . .

SPEAKER ALESEN: The chair will appoint as tellers Dr. James S. Edwards of San Mateo, chairman; Dr. Paul Michael of Alameda, and Dr. Leopold Fraser.

Will the tellers please pass out the ballots. This is ballot number one on the proposed new constitution.

As you know, adoption requires a two-thirds vote of delegates present and acting for its adoption.

DR. WILBUR BAILEY: Mr. Speaker, may we vote by acclamation?

SPEAKER ALESEN: No, Dr. Bailey. We must vote by ballot. We would like to proceed a little more rapidly. However, we can proceed to other business just as soon as the ballots have been passed out. We can go ahead and have the address by Dr. Cass.

At this time, ladies and gentlemen of the House of Delegates, I present Dr. Cass, President of the California Medical Association. (Standing applause.)

DR. DONALD CASS: Thanks, fellows. You are going to be terribly disappointed because I gave my speech this morning. I am not going to give it again.

We have a precedent here, since Dr. Goin didn't repeat his speech, that the president doesn't make any more addresses.

I have a pleasant duty to perform today, however, and that is to award the pin or medal to our members who have been members of our society for 50 years.

I will call off the names and as I call them off I wish these doctors would come forward:

Dr. Elmer J. Couey, Fresno County. (Applause.)

Dr. Lois C. Worthington, Kern County. (Not present.)

Dr. George A. Laubersheimer, Los Angeles County. (Not present.)

Dr. F. M. Pottenger, Sr., Los Angeles County. (Applause.)

Dr. H. O. Howitt, Marin County. (Not present.)

Dr. John N. Baylis, San Bernardino County. (Not present.)

Dr. Harrington B. Graham, San Francisco County. (Not present.)

Dr. Lewis Mace, San Francisco County. (Not present.)

Dr. Emma W. Pope, San Francisco County. (Not present.)

Dr. Lionel S. Schmitt, San Francisco County. (Not present.)

Dr. Harry R. Oliver, San Francisco County. (Not present.)

. . . Standing applause. . . .

* * * * *

SPEAKER ALESEN: From the very nature of the situation, it will be impossible to act upon the amendments to the proposed new constitution until we know the action you have taken upon the proposed new constitution. And we can't, of course, act upon the proposed amendment to the present constitution until the proposed new constitution has been acted upon.

Therefore, while the tellers are performing their duties we will proceed to the next items of business.

The chair recognizes Dr. Sidney J. Shipman of San Francisco, Chairman of the Council.

REPORT OF THE COUNCIL

DR. SIDNEY J. SHIPMAN: Mr. Speaker, members of the House: The Council has two additional items to the report which you have already seen. You may know that an attempt has been made to revive the old EMIC program. The Council believes this is not advisable at the present time and also believes that the C.M.A. should have a positive platform and in view of that fact proposes this resolution:

Resolved, That in view of certain legislation now pending in Congress on the subject of providing medical services for the wives and infant children of enlisted men in the armed forces, the California Medical Association go on record as expressing support of the principle of giving such aid to the families of our fighting men in cases of hardship without, at the same time, creating any interference with the practice of medicine, choice of physician, or with current hospitalization procedures, and wherever possible through the use of existing medical care and hospitalization prepayment plans working within the framework of medical and hospital organizations.

You are also familiar with the Student American Medical Association. The Council has a resolution with regard to this:

Resolved, That the House of Delegates of the California Medical Association express its complete support of the Student American Medical Association and urge upon the component county medical societies their full cooperation with the chapters of this organization which are or will be formed in the medical schools of California; and be it further

Resolved, That the House of Delegates adopt a policy of making available to the California members of the Student American Medical Association annual subscriptions to the official journal, CALIFORNIA MEDICINE, at an annual rate of $1 per year, the additional $2 per year required by postal regulations to be supplied by the Association in its annual budget; and be it further

Resolved, That the adoption of the above recommendation would make the further publication of *Future M.D.* unnecessary, wherefore its publication should be discontinued with the thanks of the Association extended to its editors who have so capably filled the gap during the formation of the Student American Medical Association.

SPEAKER ALESEN: Those portions of the addenda dealing with policy will be referred to Reference Committee No. 1. That portion dealing with recommended changes in budgetary matters will be referred to Committee No. 2 on finances.

Proceed, Dr. Shipman.

DR. SHIPMAN: I proposed this most recent resolution.

William Bender, the son of Dr. William Bender of San Francisco, was kind enough to accept an invitation to come before the Council this morning and give us his experiences with the Student Medical Association.

Bill Bender is a senior at the University of California, and at the recommendation of the Council, has agreed to appear before you. The Speaker has given us permission to do so.

Is Bill Bender here?

A MEMBER: Dr. Shipman, that is my responsibility. I counted on a few more minutes in Dr. Remmen's speech, and I told him he could stay upstairs a few minutes longer.

SPEAKER ALESEN: We will proceed, then, Dr. Shipman, and as soon as Bill Bender comes in, will the chair please have that information?

Next the report of the Trustees of the California Medical Association. Any additional report, Dr. Cass?

DR. DONALD CASS: No further report.

SPEAKER ALESEN: Next, report of the Auditing Committee.

DR. DONALD D. LUM: Nothing further to report, Mr. Speaker.

SPEAKER ALESEN: Report of the Secretary.

SECRETARY DANIELS: Mr. Speaker, no further report.

SPEAKER ALESEN: Report of the Executive Secretary.

EXECUTIVE SECRETARY HUNTON: No further report.

SPEAKER ALESEN: Report of the Editor.

DR. DWIGHT L. WILBUR: No further report.

SPEAKER ALESEN: Reports of District Councilors. Do any of the District Councilors have anything to report? (No response.)

Reports of Councilors-at-Large. (No response.)

Report of legal counsel, Peart, Baraty and Hassard.

MR. HASSARD: No further report.

SPEAKER ALESEN: Reports of standing and special committees: Executive Committee, Donald Lum.

DR. DONALD D. LUM: No further report.

SPEAKER ALESEN: Committee on Associated Societies and Technical Groups, Robert A. Scarborough.

DR. ROBERT A. SCARBOROUGH: No additional report.

SPEAKER ALESEN: Committee on Health and Public Instruction, Dr. Orrin Cook.

DR. ORRIN COOK: No further report.

SPEAKER ALESEN: Committee on History and Obituaries, Dr. Edmund T. Remmen.

DR. EDMUND T. REMMEN: No further report, Mr. Chairman, except if any of you have any historical material, any photographs of well-known members of the Association, or any material to help Dr. Kress in his history, please send it to the office of the State Association to be forwarded to Dr. Kress.

SPEAKER ALESEN: Committee on Hospitals, Dispensaries, and Clinics, John B. Hamilton.

DR. JOHN B. HAMILTON: No further report.

SPEAKER ALESEN: Committee on Industrial Practice, Raymond M. Wallerius. (No response.)

Committee on Medical Defense, H. Clifford Loos.

DR. H. CLIFFORD LOOS: No further report, Mr. Speaker.

SPEAKER ALESEN: Committee on Medical Economics, H. Gordon MacLean.

DR. H. GORDON MACLEAN: No further report.

SPEAKER ALESEN: Committee on Medical Education and Medical Institutions, L. R. Chandler. (No response.)

Committee on Organization and Membership, Carl L. Mulfinger.

DR. CARL L. MULFINGER: No further report.

SPEAKER ALESEN: Committee on Postgraduate Activities, John C. Ruddock.

DR. JOHN C. RUDDOCK: No further report.

SPEAKER ALESEN: Committee on Publications, George Dawson.

DR. GEORGE DAWSON: No further. (Laughter.)

SPEAKER ALESEN: That certainly is representative of an economy of words. Thank you, Dr. Dawson. (Laughter.)

I know the next gentleman is going to have a report that is very interesting to every member of the House of Delegates. I can vouch for it.

Committee on Public Policy and Legislation, Dr. Dwight H. Murray.

Now, in introducing Dr. Murray I would like to say just a personal word. Dr. Murray is one of the outstanding workers of the California Medical Association. He is in Sacramento on behalf of the California Medical Association. He is in Chicago on behalf of the American Medical Association. He also goes to Washington, and in between times he attempts to practice medicine.

Dr. Murray, would you tell us about the wars on the political front? (Applause.)

REPORT OF COMMITTEE ON PUBLIC POLICY AND LEGISLATION

DR. DWIGHT H. MURRAY: Mr. Speaker, members of the House of Delegates, and guests: I am very glad to report to you again that the legislative session of Sacramento is halfway through. So far there has been no adverse legislation passed, but remember that the last half is always the hardest: in the last mile, you know, the going really gets tough. So, don't expect too much in the last few days.

At this time I want to take the opportunity to thank the members of the Legislative Committee, and also the men who really answer the bell. That means Ben Read, Ed Clancy, Hap Hassard, and John Hunton. That is quite a team, and when they

get into action, something has to happen. Fortunately, it usually happens for the best of medicine.

The Woman's Auxiliary has been very helpful to us at all times and we certainly appreciate the assistance that they give us.

Also, the Legislative Committee could not function if it weren't for the Council and the officers behind us. The Council is more than generous, more than liberal with its views and with its permission for the Legislative Committee to do certain things. I fear sometimes that we may get them into trouble.

I want to tell you about my idea of the general feeling at the Legislature. I have been going to Sacramento now for 11 years, and in that 11 years it seems to me that there has generally been a better feeling between the legislators and the medical profession. But this year it is decidedly better than it has ever been before. Now, that didn't just happen. It didn't just happen because it is 1951; it didn't just happen because of anything except the work that you fellows did at home, and that we appreciate very much.

I can name you dozens of candidates in whose elections you are interested, and that is reflected in their actions at Sacramento.

Now, don't sell yourselves short and don't think that the Legislative Committee of the California Medical Association or any other legislative committee can function without that help at home. Believe me, that is appreciated and the effects are very clearly seen.

When we talk to the legislators about legislative matters they will listen to us. It doesn't mean they will always agree with us, but at least they will sit down and listen to us, and we'll say, "Well, now, perhaps you would like to talk with Dr. Brown, or Dr. Smith down home about it." And frequently that is done.

Now, your two bills are things I want to mention in an over-all way, and I will later call on Ben Read to speak to you about some of the particular bills.

You have perhaps heard quite a lot about the Rehabilitation Bill, Senate Bill 1434, particularly you people in Los Angeles.

That bill first provided that the medical care of the handicapped children, and not only handicapped children but handicapped adults, should be under the Department of Education. We objected to that very strenuously. We felt that the Department of Education had no more business directing the physical rehabilitation than we have of trying to teach the three R's, and they were told so.

They came back to Sacramento after two weeks' time and agreed that we were correct, and told us that they would be willing to accept some amendments.

Those amendments were drawn up entirely at our direction, and were entirely acceptable. So that is why the change of pace of the California Medical Association with reference to the rehabilitation bill. That is the reason, gentlemen, that it is very difficult for your Legislative Committee to keep the various county legislative committees informed on what is going on.

I have been asked several times, "Can't you tell us what is going on? Can't you tell us the status of this bill or that bill? Can't you direct us a little about this or that?"

It is impossible to do so in advance because we may have to retract some statements, and I think we had better not make a statement than to make one and have to retract it.

If at any time any of you wish to know anything about the status of any particular bill, call some member of the Legislative Committee. You may call Ben Read, Ed Clancy, John Hunton, or myself, and we will try to give you the exact status of the bill at that particular moment.

The Board of Medical Examiners had a number of bills and we were very glad to have them ably presented by the president of the Board of Medical Examiners, Dr. Bailey. He made two trips to Sacramento. We are sorry to have to ask him to do that, and when I first spoke to him about it he had this complaint and that complaint and this excuse and that excuse, but none of them were any good, and he came along like a gentleman and did a masterful job.

We are having quite a little difficulty at the present time, and I know a great many of you are aware of this, with the pharmacy bills, with particular reference to the dangerous drugs. Now, there are a great many bills, and I shall not attempt to tell you, but Ben Read will tell you something about some of the particular bills in a few minutes. It is just impossible for us to keep you informed because the situation is changing all the time. We will talk to an author of a bill and he will decide to withdraw the bill, or we will talk to him and he will decide on certain amendments; so it is ever changing, and that situation has been a bit troublesome. I hope we may get it ironed out to the satisfaction of the pharmacists and the medical profession.

One bill that created quite a lot of tension was the bill on animal research. You might call it "The Old Dog Bill," or you might call it most anything you want. I have heard it called a lot of things. (Laughter.)

Anyway, this animal research bill provides that the laboratories doing animal research shall be licensed and inspected by the Department of Public Health. There was a great deal of argument about it one way and the other among different people in the profession, but I wish to thank the deans and faculties of all medical schools that supported us on this bill. All of them came to Sacramento at a specified time. Some of them came twice.

I think I should tell you this one particular experience, not necessarily because of the personalities involved, but to show you really the political power, if you please, of the medical profession.

This animal research bill was to be heard in the Senate before the Committee on Public Health and Safety. These faculty members of all the medical

schools were there, and also the dean of the school of veterinary medicine at Davis, Dr. Hart. We had breakfasted together that morning and we had programmed the meeting. It was decided that Dr. Kerr would make the presentation. When Dr. Kerr stepped around in front of the committee to speak, the chairman of the committee said, "Gentlemen of the committee, I wish to state to you that I wouldn't be here today if it weren't for Dr. Kerr. Dr. Kerr saved my life."

You could readily understand that there was no difficulty getting that bill through the committee. (Laughter.)

Now that, perhaps more times than you gentlemen know about, brings results. I like to tell you these things, and I would like you to know and to feel proud of the fact that you do have a certain amount of political influence, every one of you, and please don't forget to use that when the proper time comes.

I can't thank you too much for such cooperation and such spirit as that because, as you well know, the thing that would please our opponents most would be to have a rift or a split in our group. That would mean to them certain victory.

Now, on the national front I wish to say a few words about some of the bills and some of the feelings in Washington. Don't think for a minute that they are not trying just as hard as ever to pass socialized medicine in some form or another. I was talking with Dr. Goin about it yesterday and it reminded me of when we were kids. We had these animal cookies and we would want to save these cookies, you know, and we would take a little bit here and a little bit there and pretty soon the whole animal was gone.

Now, that is exactly what they are trying to do in Washington at the present time. They have realized finally that the direct approach is not practical; neither is it popular, nor has it been successful. Consequently, they are trying some other method of approach, and that we find best in Senate Bill 337.

Senate Bill 337 is the one that provides for federal aid to medical education. The Administration is more anxious to have that bill passed than any other bill on the calendar pertaining to public health and welfare. They are doing everything they possibly can.

Now, unfortunately, there is not a united front in the profession about this entirely because some of the deans in some of the medical schools—you know there are 79 medical schools in the United States—some of the deans in these schools feel there is an opportunity to get some easy money, federal money. Why not get it?

Well, let's be certain about the control of it. There has been a decision handed down by the Supreme Court that says that that which the federal government subsidizes, it will control. So I don't think that it is possible for the medical schools to accept federal subsidy without federal control and, gentlemen, that is why we are opposed to this bill. That is why the American Medical Association started with an appropriation of $500,000 to aid medical schools, and why the California Medical Association put in another $100,000.

Gentlemen, I want to tell you that $100,000 may seem like a lot of money to you, but you never spent $100,000 in a better way than that. The comment that that has caused, not only among people away from California but, if you please, with your own California legislators in Washington — that has pleased them very much and they are very happy and proud of the fact that the California Medical Association is willing to back up its ideas with money.

I can't thank you and compliment you too much on that action.

Now, for the bills with regard to the care of maternity cases. You heard Dr. Shipman speak about it. It is our purpose and intent to try not to have the old EMIC program fostered on the medical profession as it was about five years ago. If there is anything that we can do to prevent it, and I think we can, it will be done. Any resolution that will come from this meeting here with reference to that will be greatly appreciated by the Legislative Committee of the American Medical Association.

Now, Mr. Speaker, I should like to have Ben Read speak to you and explain some of the bills that we have been hearing in Sacramento.

SPEAKER ALESEN: Thank you, Dr. Murray. (Applause.)

Mr. Ben Read, will you please come forward?

We don't need to introduce Ben Read any more than we do men like John Cline, Vince Askey and Lowell Goin, who have done a lot for the California Medical Association in the past years.

Mr. Ben Read! (Applause.)

MR. BEN H. READ: Mr. Speaker, Mr. President, officers and members of the House of Delegates: As Dr. Murray has told you, we are now engaged in the fastest session of the Legislature that I have ever seen, and that goes, I think, for all the observers who have been to Sacramento. In fact, things are moving so rapidly that one of the old-timers in the Legislature said the other day he is now taking only a quick straight drink because if he stopped to drink a highball, two bills would pass during that period. (Laughter.)

As of Thursday night, 5,246 bills have been introduced in the Legislature, and we have found, as usual, that about 10 per cent of them refer to you and your problems.

As Dr. Murray has told you, we are happy to report that as of today no legislation considered adverse to your interests has passed, and many measures that you have sponsored have been passed and some of them signed into law. However, things can change very rapidly in the closing days of the legislative session, and we are keeping our fingers crossed in this rapid pace to make sure that something does not slip by.

I want to make this as brief as possible. As I started forward some man in the back of the room

asked me to make it very short, and I will try to do so, but I do think that a few of these bills should be brought to your attention, and in order to save time I have grouped the subjects alphabetically.

Dr. Murray told you about the bill on animal experimentation. I would like to tell you that a group of fanatical anti-vivisectionists is still opposing that bill, and they are flooding the members of the Legislature, urging them to defeat it. It is Senate Bill 1671. It is now on the inactive file of the Senate because it must await the passage of the budget. But if you have an opportunity, will you please address a communication to your member of the State Legislature, urging him to support Senate Bill 1671.

There are a number of bills which would make chiropractors physicians and surgeons by law rather than by education. We are watching those very closely. None of them has been, as yet, set for committee hearing but we do anticipate there will be our usual battle on those suggestions.

Assembly Bill 1541 sponsored by the Department of Public Health is an effort relating to the regulation of clinical laboratories, technologists, technicians, and so forth, and has been approved by the Assembly Committee on Public Health and the Committee on Ways and Means because it carries an appropriation, and now is on the inactive file of the Assembly again awaiting the passage of the budget.

That bill was opposed by chiropractors when it was presented in the committee, and it will again be opposed by them as it progresses through the Legislature. But I noted particularly that pathologists were interested in that bill, and we are watching it, and we hope eventually it will pass.

Dr. Murray has told you there are several bills relating to dangerous drugs. That is a big subject and a hot subject, and it breaks out in the newspapers every few days, as you know. The federal authorities and some of the state and county authorities who are almost fanatical on the subject are clamoring for certain legislation. In fact, one of the members of the police department told me they were going to demand that any time a sedative is given to a person, or one of the dangerous drugs, hypnotic drugs, it should be given only by the physician.

I said, "Do you mean that if the hospital calls late at night and says, 'Doctor, Mrs. So-and-so can't sleep, should I give her something,' should the doctor get up and go to the hospital and give that to her?" He said, "Yes, that is what we intend to insist upon." (Laughter.)

We don't want, naturally, to throw down the bars, but we do want what we thought we were getting in 1949, when all parties agreed to amendments to the Dangerous Drug Act, and they were passed. But there were some interpretations by the Attorney General's office which changed that. There are about half a dozen or so of those bills. They are now in a subcommittee of the Assembly Committee on Public Health headed by Assemblyman Byron Rumford, a Berkeley pharmacist. We are meeting next Monday to attempt to work out a bill to help you to carry on your practice as you have in the past, but at the same time to try to stop any leaks, and we are really going to have to do some work on that one.

Disability insurance, of course, is a subject that we have to watch very closely. You know that the employed person pays one per cent; one per cent of his salary or wages is deducted and sent in to the State Disability Fund. That is to pay him when he is ill and cannot work because of illness. The part that you as the employer pay in to this state fund goes to pay the man when he is out of work and can't find a job, but his own one per cent is frozen purely and simply for relief when he is ill and cannot work.

At the present time he gets $25 a week and he gets $8 a day for 12 days if he is confined in a hospital under the direction and orders of a doctor.

Now, that fund has been increasing; two years ago there was $80,000,000 in reserve and today there is $102,000,000. As the fund increases, naturally there is a desire on the part of labor and some political groups to pass that money out. They say, "The man paid it, why shouldn't he have it?" So, there are bills before the Legislature. One would raise the amount of weekly pay the man receives, when he is sick and cannot work, to $35 a week.

There is currently an attempted agreement between insurance companies and labor upon that figure, but business said it was not consulted. Certainly you were not consulted, and other groups were not, so there is some opposition to it.

It looks now like that figure might be raised to $30 a week and some other changes made.

There are also some bills to increase the hospital benefits, and we understand that the Governor expects to urge the Legislature to pass a bill which would give the individual $12 a day for 20 days when he is confined to a hospital under the orders of a physician. The theory is that he will use that for paying his hospital bills, but we understand from a great many of the hospitals they have not yet received these funds they have been paid in the past.

It is difficult for us to oppose that because it is the workers' own money. Yet it is simply another little foot in the door, or the toe in the door, and with that $102,000,000 up there we are frequently told there is quite a movement for use of that fund to give every employed person an annual physical examination; that that would stop everything. And then the next move would be, of course, that there wouldn't be enough doctors to do it, so the state should set up some traveling teams of doctors or something; then you are off to the races with the really socialized medicine program. So we have to watch carefully the 100 or more bills introduced on this subject of disability insurance.

This year the Governor has sponsored a new category of state aid with federal contributions, for totally and permanently disabled persons. They passed a bill to give aid to those people. I think the figure in California is $75 a month for permanently

and totally disabled. There are various figures on that in California. Anyway, business opposed it and the County Supervisors and State Chamber of Commerce opposed it before the Legislature, but their opposition was of no avail and the bill is now out on the floor of the Assembly. It opens up an entirely new field in California.

To date no effort has been made to move the A. F. of L.-sponsored compulsory health insurance bill. That is the same bill that has been before the Legislature in the past, and at the present time it is still sleeping in committee, where we hope we will be able to keep it.

An interim committee on insurance headed by Assemblyman Geddes has introduced Assembly Bill 2693, aimed at controlling insurers who offer fantastic benefits and fail to produce; these rackets you hear on the radio. That has passed the Assembly and is now in the Senate Judiciary Committee. It is meeting violent opposition from some groups.

There was a bill to set up licensure for masseurs. I guess the members of the Assembly Committee thought they would like to study these massage parlors for a couple of years, so they sent that to an interim committee.

No bills considered detrimental to the ethical practice of medicine have passed the Legislature to date. A series of bills sponsored by the State Board of Medical Examiners and the C.M.A., to make some needed changes in the Medical Practice Act, have passed the Legislature and have been signed into law by Governor Warren.

For some unknown reason much uninformed opposition has been aroused by fringe groups to Assembly Bill 2672, which would define "diagnose" and "diagnosis," and to Assembly Bill 2673, which would make the third conviction of the violation of the Medical Practice Act a felony. These bills have passed the Assembly without opposition and are now in the Senate Committee on Business and Professions.

I think a lot of you heard that number which would define "diagnose" and "diagnosis." We don't know why the opposition came up so violently to this. We think it was aroused by fringe groups.

There was some legal opposition from the State Department of Motor Vehicles who thought the testing of drivers might be considered as "diagnosis," but amendments were offered to amend that situation and that bill is out of the committee and on the floor of the Assembly for final action.

The State Department of Mental Hygiene introduced an attempt to permit unlicensed practitioners of medicine to practice in state mental institutions for a period of five years. About 1941, I believe it was, a bill was passed to the effect that a person licensed in another state—which state meets California qualifications—may come to this state and apply for a right to take the examination and then practice for a period of one year in a state institution under the direction of a physician and surgeon licensed in California.

Well, that has been in existence for about 10 years, and still the department says they can't get enough doctors in these institutions. They came up with a proposal that they be allowed to practice five years without a license. We couldn't see why the poor individuals locked up in institutions should be exposed to these individuals who were not licensed in California when they were not good enough to practice on the general public, so we opposed that, and that bill at the moment is dead.

Senate Bill 1602 relating to the employment of physicians and surgeons by licensed charitable institutions, foundations, clinics, or by approved medical schools operating clinics, if there is no charge for the professional services rendered, has been signed into law by Governor Warren.

There is quite a little dispute on between the surgical supply houses and the Pharmacy Board relating to the activities, or what the surgical supply houses can do. The Pharmacy Board wants to require them to have a registered pharmacist on duty and they cannot continue to sell certain supplies to you as they have in the past. The surgical supply houses want to continue as they have have in the past. The California Medical Association has taken no action on these bills, but we have had numerous calls and letters from physicians throughout the state urging that the situation remain in its present status, that it remain in status quo.

On Thursday the bill which would have set up a State Board of Hearing Aid Examiners was tabled in the Senate Committee.

Next Thursday morning we again will have before us the old perennial bill to set up naturopathic examinations, and to license naturopaths, whoever they are, with all the rights of physicians and surgeons in California. We have defeated it in the past and we hope we will be successful again next Thursday.

We had our annual tussle with the optometrists. The Federal Aid program for the blind which was contained in HR 6000 requires that a person who makes application for blind aid must have a certificate from a physician skilled in diseases of the eye, or an optometrist; and California, in order to get the $3,000,000 which is coming, which it expects to get from the federal government, must meet that federal definition; but the bill as introduced in California went further and would make the optometrists do things we thought beyond their field, and we opposed them in that. As a result, the bill that will be carried through is only a minimum bill to meet the federal requirements, which is the best we could get out of it.

The subject of physical therapy started out to be one of the hottest subjects in the Legislature, and there was Assembly Bill 626 sponsored by the C.M.A. and the American Association of Physical Therapists, working under the direction of physicians, to be registered. This was violently opposed by people who perhaps are not so fully trained as the members of the American Association of Physical Therapists, but it has passed the Assembly and is now in the Senate. That bill, contrary to all the

misinformation, does not put anybody out of business. Anyone who wants to practice physical therapy as he has in the past will be able to do so.

I think some of you have heard about this move to set up a State Board of Psychology Examiners to license psychologists. That is another hot bill before the Legislature. You have a group of persons calling themselves psychologists who want such a bill, and on the other hand you have the California Psychology Association, the State Department of Mental Hygiene, and many other groups opposing it because they don't see the necessity of setting up another board on the fringes of the healing arts. That bill came up for hearing about three weeks ago and it was so poorly drawn it didn't even have a definition of psychology in it. The committee told the sponsors to write it over, and it will be up for hearing next Wednesday afternoon.

Dr. Murray has told you about the rehabilitation bill.

On the workmen's compensation subject, there were about one hundred and some bills introduced, and we had to watch every one of those carefully because any one could be amended to affect you. Labor and employers finally reached an agreement, and the agreement is to the effect that all bills should be dropped on that subject except one master bill which would raise the temporary benefit to $35 a week, death benefits from $6,000 to $7,000 in case of a widow only, and from $7,500 to $8,700 for a widow with dependents. Dentures and eyeglasses are to remain as they are at present. On that basis all the other bills relating to workmen's compensation were dropped, which was a relief to us.

One more brief subject, Senate Bill 802. As many of you have heard, it aroused considerable opposition over the state because in its original form it would have restricted you to supplying your patients with only emergency remedies, just the remedies for actual emergencies. There was considerable opposition to that because your patients wanted the thing you wanted; you supply the drugs you think they need. You want it to remain as it is now. There was opposition from quite a few of San Francisco physicians who took the time to come to Sacramento, and there was opposition all over the state; so much opposition that the author of the bill, Senator Kraft, withdrew it. This was one of a series of three bills he had on the subject, and no direct action has been taken on any of them.

Thanks to the vigorous opposition of veterans in the San Francisco and Los Angeles areas Assembly Bill 2187 was taken off calendar by the author. This was a bill of about four lines, and it provided that any person who made application for the right to take the examination of the Board of Medical Examiners could take that examination if the school from which he graduated was accredited and approved at the time his application was filed, not at the time he graduated, which is the present law. There was an inference that the veterans wanted this. The veterans throughout the state quickly showed the committee, they did not agree with this belief.

In the closing days many things can happen to bills, and we have to be very careful regarding them. But before I bring this one little matter to your attention I want to tell you that your colleagues in Sacramento do a tremendous job in helping us with our legislative work. One hundred twenty members of the Legislature and their families are away from their homes, and they are in Sacramento hotels and apartments for a period of six months. They develop a great many ills at all hours of the day and night, and the Sacramento physicians have been very cordial and cooperative at any time we have called upon them to get up at any hour of the day or night to take care of the members of the Legislature. That is very valuable assistance to us in our work.

Now, just to show you an example: Assembly Bill 3033 was introduced January 23, 1951, and went to the Committee on Boards and Commissions. At first glance we wouldn't pay any attention to it because we never have bills before the Committee on Boards and Commissions.

It was an act to amend certain sections of the Alcoholic Beverage Control Act, relating to the State Board of Equalization.

We have not had anything before relating to the State Board of Equalization, but on May 8 there was an amendment added away over on the last page, an amendment to the Business and Professions Code, which I would like to read to you. I do this to show why we have to be on our toes. Remember, this is the Alcoholic Beverage Control Act that it amends:

"The procuring or aiding or abetting or attempting or agreeing or offering to procure a criminal abortion constitutes unprofessional conduct within the meaning of this chapter; but no license shall be suspended or revoked for a violation of this section upon the uncorroborated testimony of the woman upon or with whom the offense was committed."

There is an Alcoholic Beverage Control Act amendment, and now it is an amendment to the Medical Practice Act. That shows you why we have to watch very carefully over 5,000 bills. (Applause.)

SPEAKER ALESEN: Ladies and gentlemen of the House of Delegates: It is a pleasure to present Mr. William Bender to you. We heard this young man this morning give an excellent presentation. He is a senior medical student of the University of California. Like father, like son; Mr. William Bender. (Applause.)

MR. WILLIAM BENDER: Mr. Speaker and members of the House of Delegates: I was originally asked by Dr. Shipman to say a few words to the Council at breakfast this morning about the newly formed Student American Medical Association. I gave my speech about it, a few personal observations, and was then cross-examined for a quarter of an hour by various Council members; then was informed I would speak before the session here this afternoon. So, I am not too well prepared, but will try to give you the main ideas of what we are doing here.

I will divide my speech into two parts: First, a discussion of the Student American Medical Association, then some personal observations.

As you may remember, two or three years ago a member of the House of Delegates of the American Medical Association suggested that the American Medical Association sponsor and help form a student organization. Basically he was worried about the only existing medical student house staff organization, and that is the Association of Interns and Medical Students, AIMS. At that time it was pretty well infiltrated with communists. Two of its top officers went to the Budapest peace parade sponsored by the communists, and very vocally and loudly proclaimed Russia and her satellites in the usual communist style. So, the American Medical Association went ahead to start up this organization of the students.

I was sent to Chicago as Dean Smyth's representative last year. There were 47 schools represented there. All the medical schools were sent invitations. Approximately half of the medical students there represented organizations that had already been formed on their own campuses, which would become part of the Student American Medical Association. The others were personal representatives of the deans of the various medical schools.

The most immediate problem that came up was that the students wanted to know from the American Medical Association just why the American Medical Association wanted to start that organization. Dr. Lull in his introductory address to us, made the best statement, I think, as to why the American Medical Association wanted to have it, and that is that 75 per cent of the doctors of the United States are members of the American Medical Association. It follows, then, that 75 per cent of the medical students will probably become members of the American Medical Association, and it behooves the students to know something about the American Medical Association, so that when they become active members of their local societies and the American Medical Association they will be able to take an active interest in it.

While there we wrote a constitution. We elected officers, and planned programs of what we were going to do in the future. I will read off some of our ideas on our program. Most of them are beginning to function already.

We are investigating health insurance for medical students and their families on a nationwide scale. We are trying to set up nationwide internist information written by informed and interested people other than publicity agents for the hospitals. (Laughter.) I stress that because I am a senior student and I got a lot of information from the hospitals on how good they were and found out they weren't very good.

We hope to get reduced rates for books and supplies on a nationwide scale for students.

Surprisingly enough, we are getting out a student journal which we hope will be self-supporting through advertising and that will be out around October 1.

We are trying to promote a program for undergraduate research funds for medical students.

We hope to get reduced rates for the American Medical Association *Journal* for medical students.

We are trying to get summer placements in a kind of clerkship affair for the medical students on a nationwide scale.

Going on to our local situation here in California, we have four medical schools. I think I will start with the worst and get up to the good part, so I will start with Stanford. (Laughter.)

Stanford was invited to go this national convention, but it didn't send a representative. Dr. Cheney of the San Francisco county society became interested in our chapter at U.S.C., and the student officer of the Student American Medical Association contacted the dean of that university and got a "Well, we will wait and see" attitude. This is a quote from one of the letters I have gotten. So, no help there. Stanford doesn't have an organization and it doesn't look as though it wants one.

U.S.C. was represented in Chicago. The student who is trying to start up the Student American Medical Association there has had trouble getting beyond the student body and the newly formed Student Council. Both of them wanted to wait until their own organizations were more stable.

He felt that by December of 1951 his organization would probably be running and he would be able to send a delegate at that time.

The College of Medical Evangelists is more or less in the same situation, but I think we will be able to have its organization working in a short period of time.

In a poll of the upper class, 108 out of 150 signified they would very willingly become part of the Student American Medical Association. The main hindrance here is the distance between Loma Linda and the Los Angeles County Hospital, which divides up the four classes.

I would like to come to the University of California now, since that is my alma mater. We have a membership of 120 members out of a possible 150 students. I think that is pretty good, considering that the University of California is a hotbed of socialists and economists, if you look at it that way.

One of the big selling factors for membership in our organization was through the California Medical Association. By contacting Dr. Shipman and Dr. Dwight Wilbur, we were able to get a reduced rate for the students for the journal of the California Medical Association at $1 a year, and the California Medical Association will underwrite the rest of it. This makes our dues $2 a year, and I will willingly admit that over half the fellows who joined our organization, approximately 60, joined it for the journal alone. That is to be expected.

Our plan is to set up meetings, probably monthly, in which we will have guest speakers coming from outside the state, through the San Francisco County Society, who are going to come and talk to the

society. We will have them for an afternoon, and they will also talk to the medical students at the university.

In addition, we hope to have monthly meetings and have outside doctors come in to tell us how to pick out secretaries and keep books, things we don't learn in medical school. (Laughter.)

We have a program at Cal, and probably the most important part of it is to get insurance to cover medical students when they are out of school. Just this winter we had a medical student who almost had to drop out because of a skiing accident and the hospital bills were pretty steep. That is just an example.

We, at Cal, are covered as students during the school semester, but not otherwise; also insurance for the families of medical students.

We are going to participate in the intern information, summer placement, and things like that. We hope to have presentation of research papers by the students. I think that is a good point.

We have an advisory board of five members set up by the national constitution. They are: Dean Francis S. Smyth's choices: Dr. Herbert Johnstone, Department of Tropical Medicine, University of California Hospital, San Francisco 22; Dr. Ralph Byron, Cancer Research, University of California Hospital, San Francisco 22; Dr. John Adams, Department of Neurosurgery, University of California Hospital, San Francisco 22. San Francisco County Medical Society: Dr. Orville Grimes, Department of Surgery, University of California Hospital, San Francisco 22. California Medical Association: Dr. William Donald, Cowell Hospital, University of California, Berkeley.

Just one more thing as far as the Student American Medical Association at Cal is concerned. We will presently ask C.M.A. for some funds to send a delegate to Chicago for the annual convention, and that will be in December of this year.

Now it comes to my second part, personal findings and observations. I think Dr. Murray said this is where I am supposed to lift the delegates off their seats.

In presenting the Student American Medical Association to the students, I happened to mention the American Medical Association. I want to tell you that I was very loudly and vigorously booed when I mentioned the American Medical Association. That is the way the students feel about it at Cal.

I can give some reasons for it from discussing it with the students. I think the main reason why the American Medical Association is severely criticized by the students is that they have had no positive action, at least in the students' minds, towards socialized medicine. And they cite back in the '30's when the American Medical Association denounced private insurance plans, and they just keep bringing it right up until the present day.

There is no positive action; all negative. At least that is what the students think.

I also want to say along with this, and this was asked me by several Council members, I think the majority of the students in the senior class of the University of California are for socialized medicine in one form or another. Why are they? I was asked that, too. It is pretty hard to pin it down. I think the main reason is that we have come out of a war in which the national trend, the trend throughout the world, is socialization, and these future doctors are part of that trend.

Another reason is that the majority of them come from the University of California at Berkeley, and U.C.L.A., and they certainly get their full of socialism there. There is no doubt about it.

I was asked whether the socialistic ideas are more intensified in the freshman year or the senior year. I definitely feel it is more intensified in the third and fourth years at the University of California, and I think the main reason is going through the County Hospital in San Francisco and seeing those poor people there get the kind of treatment they do; the sympathy just comes out. Even though it is a form of socialized medicine now, that is the way the students feel.

I have another point here. Somebody asked me about *Future M.D.*, what the students think about that. When the first edition came out I was abused, and I am still abused and insulted because of it, because I, more or less, and a few other in the class represented the American Medical Association's viewpoints. They were insulted. They don't read the magazine any more. It goes right in the waste paper basket. They were insulted. How could anybody think they were that immature!

I think along this line of socialization I can illustrate it further as I did in the Council meeting this morning. How do I think the students are for socialization? Well, I can tell you that the majority of the students at the university medical school are in favor of Truman's administration right now as compared to MacArthur and the dispute going on. In other words, they are in sympathy with Truman. I think that is as good an illustration as I can give you.

Along the same line, in a poll of Harvard medical students a few years ago, they were offered a proposition that if they were given $800, $900 a month for the rest of their lives working as an M.D. for the government would they accept it, and 80 to 90 per cent said they would.

Since I live at home I get my father's viewpoints on the American Medical Association and its aims, and am accordingly sympathetic. The fact that the medical students' viewpoint seems so different may be surprising to you. Perhaps I have been able to convey to you some of the reasons why there are such opinions. It seems to me that, logical as it may be, organized medicine and the medical students are at the present time talking entirely different languages.

It is our mutual problem, and by "our" I mean organized medicine, the students and our own organization, the Student American Medical Association, to provide the machinery by which these two

groups come to understand each other. Thank you. (Applause.)

SPEAKER ALESEN: Thank you, Bill Bender.

Let's proceed with the reports of the standing committees.

Committee on Scientific Work, Albert C. Daniels.

DR. DANIELS: No further report.

SPEAKER ALESEN: Career Commission, Lyell C. Kinney.

DR. KINNEY: No further report.

SPEAKER ALESEN: Editorial Board, Dwight L. Wilbur.

DR. WILBUR: No further report.

SPEAKER ALESEN: Public Relations, John Hunton.

SECRETARY HUNTON: No further report.

SPEAKER ALESEN: You have adopted the new Constitution. Yes votes, 219; no votes, 2. (Applause.)

It is now necessary to consider the disposition of the two amendments to the proposed new Constitution, the now existing Constitution under which you are operating. The chair recognizes Dr. Lyle Craig for advice upon those amendments. Dr. Craig!

REPORT OF REFERENCE COMMITTEE
No. 3 (continued)

DR. LYLE C. CRAIG: Mr. Speaker: The first of the two proposed constitutional amendments to the new Constitution is printed on page 34 of the Annual Reports Bulletin which is in your hand. It amends Article IV. Section 4, of the new Constitution referring to special assessments.

The only change from the existing provisions is that the penalty for failure to pay such assessment shall be levied by the local society instead of the House of Delegates as printed in the Constitution. Your committee feels such arrangement would not be to the best interests of the California Medical Association, since inequalities would certainly arise and as a matter of policy the penalties as well as the assessment should be uniform throughout the Association. We, therefore, advise strongly that this amendment should be defeated.

SPEAKER ALESEN: The committee's recommendation is that this amendment do not pass.

The Speaker's suggestion is that you would save time if you elected to stand. All in favor that we vote by standing on this proposed amendment signify by saying "aye."

. . . The motion was put to a vote and it was carried. . . .

SPEAKER ALESEN: You are clear and ready for the vote upon this proposed constitutional amendment. Does anyone wish to discuss for or against before the vote is taken?

Dr. Magoon.

DR. LESLIE B. MAGOON (Santa Clara County): Mr. Speaker, would the chair make it clear whether we are voting on the amendment or whether we are voting on the recommendation?

SPEAKER ALESEN: We are voting on the amendment, Dr. Magoon. A yes vote means the adoption of the amendment under the terms of which the penalty for failure to pay an assessment shall be levied by the local society instead of the House of Delegates where it now resides under your new Constitution. A two-thirds vote is required to pass this amendment.

Are you ready for the vote?

. . . The question was called for. . . .

SPEAKER ALESEN: All those in favor of this amendment signify by standing.

. . . A standing vote was taken. . . .

SPEAKER ALESEN: It appearing to the chair that the vote is unanimous against it, it may safely be said that the amendment is lost. The chair so rules.

Dr. Craig, proceed, please.

DR. CRAIG: The second proposed amendment to the new Constitution amends Article III, Section 9(b), relating to the composition of the Council. It also is printed on page 34 of the Annual Reports Bulletin.

Your committee held hearings on this proposal. This proposed amendment, by failing to delineate the 16 new councilor districts, will place the Association in the impossible situation of being unable to elect district councilors until after the Council has met and outlined such districts, which delay is not practical because by adopting the new Constitution the incumbent district councilors must be replaced immediately by new district councilors as outlined in the new Constitution. Moreover, it does not repeal nor conform with Section 14 of Article III.

We believe that this amendment is unworkable and therefore, Mr. Speaker, request that the Speaker rule it out of order.

SPEAKER ALESEN: The Speaker will rule that the amendment is faulty for the reason stated. This is entirely without prejudice for the idea involved, and it is quite possible for those who wish to have their ideas implemented, to do so by introducing a satisfactory amendment at any one of the following meetings of the House of Delegates; such amendment to lie on the table for the necessary one year.

Having adopted the new Constitution, and having disposed of the amendments pertaining thereto, the next order of business is to consider a new set of By-Laws, because without a new set of By-Laws it is very difficult, if not impossible, to operate.

The chair recognizes Dr. Lyle Craig, chairman of Reference Committee No. 3, who will make a recommendation concerning his committee's work of yesterday. Dr. Craig!

DR. LYLE CRAIG: Mr. Speaker, members of the House of Delegates: Since the new Constitution is, as has been stated, a skeleton instrument, it leaves many details which need to be taken care of. It would be impossible for this organization to operate without adopting new By-Laws.

The By-Laws which your committee is presenting are essentially those as printed in the Annual Re-

ports Bulletin with a few changes. These changes are as follows:

A. Page 35, Chapter I, Section 2, Paragraph (c). This has to do with hearings relative to the revocation of component society charges.

This has been cleared to read:

"(c) *Hearing.* Hearing on such complaint shall be held by the House of Delegates at its first session occurring not less than three months after the date of its presentation to the Secretary-Treasurer of the Association."

B. Page 40, Chapter III, Section 2. The last line of the section will change the numeral 4 to 3. This was a typographical error.

C. Page 41, Chapter V, Section 2.

This has been changed to read:

"Commencing with the 1952 regular session of the House of Delegates, each component society shall be entitled to two delegates with one additional delegate for each 50 active members, or major fraction thereof, over and above its first 100 active members as of the first day of November of the preceding year."

Please remember that it is fixed in the Constitution now that the minimum representation from any component society is two members.

DR. LESLIE B. MAGOON (Santa Clara County): Mr. Speaker, at what point will discussion be permitted on proposed changes?

SPEAKER ALESEN: After the report of Reference Committee No. 3, which is being presented. This will be presented to the House as a report, at which time any delegate who wishes to discuss or offer amendments may do so.

Again, when this is adopted later after 24 hours' gestation, there will be an opportunity for amendments to be introduced.

Proceed, Dr. Craig.

DR. LYLE CRAIG:

D. Page 42, Chapter VI. New sections are inserted after the printed Section 2:

"Section 3—Quorum.

"A majority of the voting members of the Council shall constitute a quorum."

That was omitted from the By-Laws and properly should be there.

"Section 4—Meetings.

"a. The time and place of meeting shall be fixed by the Council at a previous meeting and at least 10 days' notice shall be given each councilor by the Secretary of the time and place of the meeting.

"b. The Council shall also meet on the call of the Chairman or upon written request of at least three councilors filed with the Secretary stating the purpose of the proposed meeting. Written notice of the time, place and object of such meeting shall be given by the Secretary to all members of the Council at least three days prior to such meeting."

That is to take care of emergency meetings. Therefore, the following sections of that chapter concerning the Council are renumbered accordingly because of the insertion of two new sections.

New Section 6 (formerly Section 4) of Chapter VI has been changed to read as follows:

"The Executive Committee shall consist of the President, President-Elect, Chairman of the Council, Chairman of the Auditing Committee and Speaker of the House of Delegates."

You will notice that that replaces the other member of the Council.

"The Secretary-Treasurer and Editor shall be members ex-officio, but without the right to vote."

Section 7 (formerly Section 5) of Chapter VI, has been changed to read:

"The Chairman of the Council, subject to its approval, shall appoint an Auditing Committee of three members, delegating one of the members as its Chairman, the duties of which committee are hereinafter specified."

That is because they are hereinafter specified in the By-Laws as presented.

E. Page 46, Chapter VII, Section 19 has to do with the Benevolence Committee. The section is somewhat redundant and verbose, and has been changed to read as follows:

"Section 19 — Physicians' Benevolence Committee.

"The Physicians' Benevolence Committee shall administer those funds of this Association hereinafter designated as comprising the Physicians' Benevolence Fund. These are:

"(a) The funds which may from time to time be allocated to it, from the general funds of the Association by the Council or by the Constitution, are the funds for this committee.

"(b) All bequests, voluntary contributions and donations, from any source whatever, that may be received by this Association for the express or implied purpose of aiding needy members and their dependents.

"Funds contained in the Physicians' Benevolence Fund may from time to time be disbursed by the Physicians' Benevolence Committee."

F. Page 47, Chapter VIII, Section 9 applies to vacancies in office. The last sentence of paragraph (b) shall read:

"Such appointee shall serve until the next Annual Session and until his successor has been elected and has assumed office."

That was to clarify the question as to whether he held office just up to the beginning of the session or not. It gives him the position until he has a successor appointed or elected.

G. Page 48, Chapter IX, Section 3.

The next to the last sentence of the Section has been changed to read as follows:

"He shall, on behalf of the Council, deliver its report to each session of the House of Delegates."

H. Page 49, Chapter 10, Section 4. Paragraph (b).

This section shall read as follows:

"(b) County Secretaries to Collect Dues. The Secretary of each component society shall cause to be collected and shall forward to the office of the Association the dues and assessments for its members, including the annual dues and assessments for the American Medical Association."

If you will refer back to Section 10 of Chapter II you will find that there is something about termination of membership by failure to pay dues, in which it refers to the dues of the American Medical Association. So, this section is made to conform.

I. Page 49, Chapter X, Section 6.

This section shall read as follows:

"All funds and moneys of the Association by whomsoever received shall be promptly forwarded to the Secretary-Treasurer of the Association and deposited by him in a depositary of the Association.

"The Auditing Committee shall inspect all bills and no demands or claims against the Association shall be paid and no funds or moneys of the Association be withdrawn from any depositary thereof except upon written voucher approved by the signature of at least two members of the Auditing Committee or by a majority vote or written approval of a majority of all the members of the Executive Committee on check or draft signed by any two persons authorized by the Council, providing all such authorized signers are under bond."

J. Page 49, Chapter X.

A new chapter is to be inserted immediately preceding the chapter entitled "Referendum and Petition."

There is indirect reference in the paragraph above to surplus funds from the publication, but there is nothing in the chapter as printed to authorize publication.

The new chapter would be Chapter XI, and reads as follows:

"Chapter XI—Publications.

"Section 1—Scientific Journal.

"The Association shall publish and distribute an official journal in the interest of the Association and of its members, devoted to the advancement of medical thought and science, to medical organization, and for the dissemination of medical and public health information.

"Section 2—Annual Directory.

"The Association may publish an annual directory of members, with such other information as the Council may direct.

"Section 3—Pre-Convention Bulletin.

"The Association, prior to the annual session, shall print a pre-convention bulletin, which shall contain reports of officers and committees; provided, that the Council shall have the right to delete or modify such reports, and provided further, that committees whose reports have been deleted or modified shall have the right to submit them to the House of Delegates in their original form if the committee so desire. A copy of the pre-convention bulletin shall be given to each delegate and alternate, on or before registration."

Chapters XI to XIV, as printed in the Annual Reports Bulletin, shall be renumbered XII to XV on account of the insertion of a new chapter.

Mr. Speaker, your Reference Committee No. 3 presents these By-Laws to lie on the table for 24 hours.

We move that at the close of today's meeting this House adjourn to meet again tomorrow afternoon for the express purpose of voting upon these By-Laws and accepting amendments thereto.

SPEAKER ALESEN: This is a motion to fix the time to which to adjourn. It is a privileged motion. You can see the purpose of it, of course; that is, to comply with the provisions of the present By-Laws, that a new set of By-Laws or any amendments thereto must lie upon the table 24 hours. Also, the technique of an adjourned meeting is used in order to meet the requirements of the proposed new By-Laws in that the district councilors must be elected 24 hours prior to the official meeting, the second meeting of the House, which will occur on Tuesday.

Do I hear a second to the motion to fix the time to which to adjourn?

. . . The motion was seconded. . . .

SPEAKER ALESEN: This is not debatable. You understand the reasons for it. You will have an adjourned meeting 24 hours from this time, this being the time at which the By-Laws are presented as a report.

DR. LESLIE B. MAGOON (Santa Clara County): Is it not in order to propose amendments to the Committee's Report prior to its being placed upon the table, sir?

SPEAKER ALESEN: That opportunity will be given the House in just a moment, but because a prior motion has been received we must dispose of that motion in order to proceed in an orderly manner.

All those in favor to fix the time to which to adjourn at 24 hours hence for the purpose of acting upon the proposed new By-Laws and amendments thereto signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

SPEAKER ALESEN: Now, you have before you the report of Reference Committee No. 3, giving the result of its findings yesterday and a proposed new set of By-Laws. That set of By-Laws has not as yet been placed upon the table. It is merely presented to you as a report in accordance with Section 68 of Robert's Rules of Order. It is, therefore, in order for you to take one of two actions: Accept it as such and order that it be filed or tabled for 24 hours, or else discuss and amend it as you see fit.

In the interest of an orderly and smooth performance, your Speaker would suggest that any amendments be not of a controversial nature in order that we may have a good working set of By-Laws.

Tomorrow when and if the By-Laws are adopted there will be plenty of time for any kind of amend-

ments to be offered at that time, but if you wish to amend the report now, you may do so.

Dr. Magoon?

DR. LESLIE B. MAGOON (Santa Clara County): Yes, sir. This may be deemed of insufficient importance to be brought up at this moment, but I think it is section C of the committee's report. That paragraph can be improved in wording without changing its meaning, and I should like to offer an amendment.

That is on the committee's report, the first page. They have headings A, B, and C. This is heading C. It is page 41, Chapter V, Section 2.

I move it be amended to read as follows:

"Commencing with the 1952 regular session of the House of Delegates, each component society shall be entitled to one Delegate for each 50 active members, or major fraction thereof, according to its membership as of the first day of November of the preceding year, provided, however, that each component society shall be entitled to a minimum of two delegates."

I don't believe that wording can possibly be misconstrued, and I think it is a possibility that the wording of the committee's version could be misconstrued. I offer that motion.

SPEAKER ALESEN: You have heard Dr. Magoon's motion to amend. Is there a second?

. . . The motion was seconded. . . .

SPEAKER ALESEN: Is there discussion?

. . . The question was called for. . . .

SPEAKER ALESEN: Are you ready for the question? Do you understand?

Mr. Secretary, will you read that, please — Dr. Magoon's phraseology?

SECRETARY HUNTON: That would make the section read as follows:

"Commencing with the 1952 regular session of the House of Delegates, each component society shall be entitled to one Delegate for each 50 active members, or major fraction thereof, according to its membership as of the first day of November of the preceding year, provided, however, that each component society shall be entitled to a minimum of two delegates."

SPEAKER ALESEN: Is there further discussion on the Magoon amendment? Are you ready to vote?

. . . The question was called for. . . .

SPEAKER ALESEN: This requires a simple majority to amend by substitution. All in favor signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

SPEAKER ALESEN: The amendment is adopted. Section C, page 41, is amended according to Dr. Magoon's phraseology.

Is there further discussion on the committee's report? If not, what is your wish?

Dr. Davis is recognized.

DR. BURT DAVIS (Santa Clara County): Mr. Speaker, a point of information. On this portion regarding the Auditing Committee, is it the intent of the committee that that should apply to all minor expenses of the running of the C.M.A. office requiring two signatures on each voucher, or what?

SPEAKER ALESEN: Dr. Craig, will you answer his question?

DR. LYLE CRAIG: Immediately following that section the next section is entitled, "Revolving Fund," and takes care of that sort of thing. In fact, it takes care of all the regular expenses. Of course, it would be obviously impossible to run any organization without some provision for paying the express company and those minor bills that come up. So, the next section following that authorizes a revolving fund to pay such minor bills.

SPEAKER ALESEN: Are there further questions, or is there further discussion? Dr. Bullis.

DR. RICHARD O. BULLIS (Los Angeles County): Would it be in order at the present time to introduce a resolution changing a section of the By-Laws?

SPEAKER ALESEN: Yes, sir. You may move to amend by substitution or any other way you see fit.

DR. BULLIS: Mr. Speaker, I would like to move to amend one section. I would like to introduce a change in Chapter II, Section 4(c) of the By-Laws, to be amended to read as follows, page 37 on Life Members, top of page, left-hand side:

"Life Members of the California Medical Association shall be elected by the Council on the recommendation of any component county society from those active members thereof who (one) have been active members of this Association for a period of 20 years or more and are more than 50 but less than 60 years of age, and have tendered to this Association a life membership fee of $150, or such other sum as the House of Delegates may from time to time determine; or (two) have been active members of this Association for 25 years or more, and are more than 60 years but less than 65 years of age, and have tendered to this Association a life membership fee of $100, or such other sum as the House of Delegates may from time to time determine; or (three) have been active members of this Association for a period of 25 years or more, are more than 65 years of age but less than 70 years of age, and have tendered to this Association a life membership fee of $50, or such other sum as the House of Delegates may from time to time determine; or, (4) have been active members in this Association for 25 years or more, and are more than 70 years of age.

"Those active members falling within classification four need not be recommended by any component county society, but the Council may not elect to life membership any active member who has ever been censored, suspended or expelled from the American Medical Association, this Association, any State Medical Association which is a constituent of the American Medical Association, or any county medical society which is a component part of this Association, or a unit of any other State Medical Association."

Mr. Speaker, the main reason for this is that most of our county societies now have group insurance plans that require continued membership, and retired membership cuts them out of these plans.

SPEAKER ALESEN: You move the adoption of this amendment to part (c), Section 4?

DR. BULLIS: I do, sir.

SPEAKER ALESEN: Is there a second?

. . . The motion was seconded. . . .

SPEAKER ALESEN: Is there discussion on Dr. Bullis' proposed amendment by substitution?

DR. E. VINCENT ASKEY (Los Angeles County): May I request how this differs from the old By-Laws which are stated here? May I speak to that a minute? I am not quite clear in regard to it.

This point of our By-Laws has been misinterpreted in the past and is capable of misinterpretation in the future.

If you remember, under the By-Laws previously in force in this Association, it stated, as I remember it, that a man could, at 50 years of age, pay a certain amount and at 60 a certain amount, and it was found by some men that since at that time when our boys were away in the service and our dues were $100 or $150, that if they paid the life membership, which was considerably less, as I remember around $50 or so, they could take a life membership merely by having been 50 years of age and, therefore, they would be life members without paying as much as one year's dues, which the rest of us were paying.

With this in mind, I think it is important that we clarify just what the situation is under the present By-Laws which our committee has studied. I don't know what change Dr. Bullis' suggestion would make. I am sure Dr. Bullis means to do what is right, and I am, therefore, Mr. Speaker, asking for a clarification on that.

SPEAKER ALESEN: Dr. Bullis, will you answer Dr. Askey's question?

DR. RICHARD O. BULLIS (Los Angeles County): Mr. Speaker, as I read paragraph 2(c) in the proposed new By-Laws, those life members elected prior to the adoption of these By-Laws shall remain as such with all the rights and privileges pertaining to such membership contained in the prior By-Laws, but no new life members shall be elected after the date of the annual session of the House of Delegates at which this section is adopted.

My interpretation of that is, Mr. Speaker and members of the House, that there will be no new life members elected after the adoption of this particular section.

SPEAKER ALESEN: Is there further discussion on Dr. Bullis' motion to amend by substitution? Dr. Magoon.

DR. LESLIE B. MAGOON (Santa Clara County): I was a member of both committees that drew up the By-Laws and Constitution, and that is, as Dr. Bullis said, the provision of life membership was deliberately omitted on the grounds that men in their 50's and early 60's who are in active practice have no right to expect permanent life membership in the California Medical Association on the payment of one or two years' dues. We don't start paying dues until we are 30 or 35. If we are going to stop paying dues when we are 50, there will be no one to support our Medical Association or our county societies financially.

If retirement were associated with life membership, we would be in favor, but a man in active practice at 50, I repeat, we didn't feel had any claim on the privilege of life membership.

SPEAKER ALESEN: Is there any other discussion? Dr. Remmen is recognized.

DR. E. T. REMMEN (Los Angeles County): I feel that the matter of life membership is merely a question of how much you pay for it. A great many well-established organizations make it possible for their members to pay a life membership at the time when their earning power is high so that they are not obliged to discontinue their memberships if illness or age or any other factor causes them to be unable to pay their dues.

The recommendation proposed by Dr. Bullis provides that the House of Delegates may at any time fix the fee or the charge. It seems to me what should be done, if it isn't satisfactory, is to amend it to make the charge or the fee for life membership compatible with the life expectancy of the individual obtaining it so he may at 50, if he has enough money, buy a life membership, and that amount will decline as time goes on.

It is only sound business based on actuarial tables, and the only objection I can see to it is the amount charged. It was all right when the dues were lower, but now the dues are high, and it seems to me it could well be amended by the House of Delegates by another resolution raising the cost to whatever is satisfactory to the House.

DR. E. VINCENT ASKEY (Los Angeles County): Mr. Speaker, at the risk of taking more of your time, I see Dr. Bullis' point, and Dr. Bullis is entitled to it. To clarify it, it would seem to me if Dr. Bullis would leave out any specified amount such as $100 and merely say "such fund or such amount as shall be designated by the House of Delegates," that would probably cover the point.

The reason I am bringing that up is this: That if we pass this amendment stating that it shall be $100, it is not probable but it is conceivable it might 500 or 600 of us that would qualify next week, and for $100 would be in for life; whereas the next House of Delegates that might meet later would say it was $500.

I think that if that amount were deleted and left to such amount as determined by the House of Delegates, it would probably be better.

DR. RICHARD O. BULLIS (Los Angeles County): Mr. Speaker, I would be very glad to accept the suggestion and delete a set amount in my proposed change in the By-Laws. However, I am rather surprised to find that there would be any large number

of members of the state society who would be politically disinclined enough to take a life membership which would disqualify them from appearing as an officer or as a member of this body.

SPEAKER ALESEN: Do you wish to offer that as an amendment, or shall we let it stand?

DR. RICHARD O. BULLIS (Los Angeles County): Mr. Speaker, can we change that?

SPEAKER ALESEN: Tell them how you would like to amend it in order to get it in force in the proper way.

DR. RICHARD O. BULLIS (Los Angeles County): By amending it to leave out the fixed amounts that were stated in the proposed change, and have it read, "an amount set by the House of Delegates."

SPEAKER ALESEN: Is there a second to that amendment?

. . . The motion was seconded. . . .

SPEAKER ALESEN: Do you wish to discuss it? Dr. Gibbons, a member of Committee No. 3.

DR. HENRY GIBBONS III (San Francisco County): Mr. Speaker, I would simply like to make this statement: That our committee, agreeing with the thought of the previous committees, felt that the life membership section was unnecessary, and that section on retired membership would be satisfactory to take care of all members, both active and retired, in the society.

SPEAKER ALESEN: There is now before you Dr. Bullis' proposal to amend his own amendment, that is, to delete the fixed amount and leave the assessment in the hands of the House of Delegates.

DR. RICHARD O. BULLIS (Los Angeles County): Mr. Speaker, one thing I would like to reiterate: A retired membership cuts the member out of the rights of group insurance, and that has been my prime reason in bringing this matter up. Group insurance means that you must maintain your membership.

SPEAKER ALESEN: Is there further discussion on this present amendment of Dr. Bullis? That is the amendment to delete. Are you ready for the question?

. . . The question was called for. . . .

SPEAKER ALESEN: All in favor signify by saying "Aye."

. . . The motion was put to a vote and it was carried. . . .

SPEAKER ALESEN: There is now before you Dr. Bullis' proposal to amend by substitution the matter of life membership as changed by the amendment of deletion.

Dr. Bailey.

DR. WILBUR BAILEY (Los Angeles County): Mr. Speaker, gentlemen: It seems to me that this is a good idea, but perhaps the insurance companies could change their rules a little instead of us having to change ours.

In France 20 years ago a letter could be carried for 25 centimes. The same letter today is carried for about 25 francs. That is 100 times as much. In other words, the franc has been devalued.

Now, of course, that will never happen to the dollar, I guess. (Laughter.)

I think fixing life memberships, retiring men at age 50 for practical purposes, when they still have a number of earning years and when we have no idea of what might happen ahead, even if left to the wisdom of this august house, is difficult to tell now.

If we put a man out for $150 or $200, maybe 10 years later we will wish we hadn't, but he no longer is a dues-paying member.

I hope we defeat this and persuade the insurance company to change its plans instead.

DR. J. P. SAMPSON (Los Angeles County): May I speak to this?

SPEAKER ALESEN: Yes, sir.

DR. J. P. SAMPSON (Los Angeles County): Mr. Speaker, members and delegates: As Dr. Bullis has so ably said, this is for insurance purposes. All other organizations, the American College of Physicians, and others have a life membership to allow a man during his earning age to put in a life membership; number one.

Number two, it seems to me that if a young man, beginning at the age of 29 or 30, whatever time of his life he begins, supports this organization over a period of vigorous earning power, that during his later years when he knows the dangers of sickness and illness may come upon him, that he should have the right to a life membership in an organization to preserve his insurance for himself and his family. Thank you. (Applause.)

SPEAKER ALESEN: Are you ready to vote now on Dr. Bullis' amendment by proposed substitution?

DR. LYLE CRAIG: Dr. Sampson has just mentioned the life memberships of the American College of Physicians and, of course, those of you who do surgery know the American College of Surgeons has such a provision. But you also know that so many life memberships have been taken there that their income is pretty badly handicapped and they have been asking for more money as contributions. That might conceivably happen to us if, for the purpose of economy, we all took life memberships. I think we should consider what effect it might have on the finances of this Association.

. . . The question was called for. . . .

SPEAKER ALESEN: The pending question is Dr. Bullis' amendment to substitute the provision of life membership for Section C on page 37. All those in favor signify by saying, "Aye."

. . . The motion was put to a vote and it was lost. . . .

SPEAKER ALESEN: The amendment is lost. Is there further discussion on the Report of the Reference Committee No. 3?

DR. WELLS C. COOK (Los Angeles County): May I call for a standing vote?

SPEAKER ALESEN: Dr. Wells Cook calls for a

standing vote. All in favor of Dr. Bullis' amendment signify by standing.

. . . A standing vote was taken and the motion was lost. . . .

SPEAKER ALESEN: The amendment is lost. There is no question about it.

Is there further discussion on the committee's report, or do you wish now to have it laid upon the table for 24 hours?

DR. JUSTIN J. STEIN (Los Angeles County): Mr. Speaker, members of the House of Delegates: If you will look on page 44 of the Annual Reports Bulletin, Chapter VII, Section 1, you will notice Standing Committees. I wish to propose an addition to the Standing Committees:

WHEREAS, The civil defense activities of the California Medical Association are administered by the Emergency Medical Service Committee which is neither a special or standing committee; and

WHEREAS, There is no Committee on Military Affairs as such; and

WHEREAS, Military affairs and civil defense activities are closely related; and

WHEREAS, The consensus of opinion of those concerned with civil defense is that civil defense is here to stay and permanent civil defense plans must be prepared and kept in readiness for instant use; and

WHEREAS, Civil defense and military activities will be of tremendous importance to the members of the California Medical Association inasmuch as there may exist a state of undeclared war for many years; be it

Resolved, That the Emergency Medical Service Committee be abolished and a new standing Committee on Military Affairs and Civil Defense be appointed by the President of the California Medical Association. The duties of this committee will be to supervise civil defense and problems of a military nature for the members of the California Medical Association.

SPEAKER ALESEN: Dr. Stein, you are moving to add another committee on page 44, Chapter VII, Section 1?

DR. JUSTIN J. STEIN: Yes.

SPEAKER ALESEN: Is there a second to this motion?

. . . The motion was seconded. . . .

SPEAKER ALESEN: Is there discussion?

. . . The question was called for, the motion was put to a vote and it was carried. . . .

SPEAKER ALESEN: The "ayes" have it. The amendment is adopted.

Are you ready now to act upon the committee's report as amended?

. . . The question was called for. . . .

SPEAKER ALESEN: All those in favor signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

SPEAKER ALESEN: By your action you have ordered that the report as amended shall lie upon the table for 24 hours and shall then be presented to you for consideration at the adjourned meeting of this first meeting 24 hours hence.

That will be 3:00 o'clock tomorrow afternoon in the auditorium of the Edison Company Building across the street.

At that time the order of business will be limited to action upon the By-Laws now lying upon the table, and to any amendments that any delegates wish to offer at that time.

Now, Dr. Donald Lum, chairman of the Auditing Committee, will present the budget as adopted by the Council. Dr. Lum!

REPORT OF AUDITING COMMITTEE

DR. DONALD D. LUM: Mr. Speaker, members of the House of Delegates: I would like to add a word of explanation. This budget has been gone over in detail by the Council. It will be referred to Reference Committee No. 2 and studied in detail by that committee, and then brought before you for study and action on Tuesday.

I, therefore, will not go into the details of the budget, but simply propose the budget for the fiscal year of 1951 to 1952, with an estimated income of $423,000; an estimated expenditure of $411,250.

On behalf of the Council I present the budget for CALIFORNIA MEDICINE with a proposed income for the fiscal year of 1951 to 1952 of $143,250; with an estimated expenditure of $135,750.

I also recommend on behalf of the Council that the dues be set for $40 for the calendar year of 1952.

SPEAKER ALESEN: Thank you, Dr. Lum.

This report will be referred to Reference Committee No. 2. Dr. Stanley Truman is chairman.

Now we come to the matter of reports of special committees.

Delegates to the American Medical Association, Dr. E. Vincent Askey, chairman. Dr. Askey!

REPORT ON DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION

DR. E. VINCENT ASKEY: Mr. Speaker and members of the House of Delegates: It has been my honor to be chairman of your delegation to the American Medical Association, and it has also been my honor to follow some illustrious men; Sam McClendon, Dwight Murray and John Cline have been the immediate chairmen previous to my tenure.

I want to say a note of appreciation to your delegation to the American Medical Association. All the members and alternates that you have seen fit to send there have worked in the most able manner that I could envision. There are many things for your delegates to do. I think that if you listen to Dwight Murray and Ben Read you know many of the things that go on in the Legislature that you don't know about, and may I say in all sincerity that that same thing occurs in the American Medical Association.

One of the things which we have been interested in outside of the House of Delegates has been the

public relations that we could, as delegates from California especially, help along. California, as you know, probably was instrumental a good many years ago, at which time Dr. Gilman was President of our Association, in developing a conference of presidents which holds a meeting the day preceding the meeting of the House of Delegates, and which has been a wonderful sounding post for the things that we deem necessary to be considered by the American medical profession.

This year it has been the privilege of your California Medical Association to have a great part in that program which will be held at the Traymore, and we have been honored by having our good Senator Richard Nixon, who will speak on the subject, "A Congressman Looks at Medicine." He will be on the program there, and will be the special guest of the California Medical Association. We feel that it will have a great deal to do not only with the actions of the House of Delegates but with the attitudes which are heard and realized and understood by the public of the United States.

It astounded me, as it did you, to hear the attitude of the medical students. As the American Medical Association, we lately—and I say "lately" because I don't think we did it early enough — we commenced an educational campaign to educate the people as to what things were in medicine. It seems to me with this fine speech that was just given to us by this young medical student we ought to turn our attention now to educate our own people. By "our own people" I mean the medical students and our doctors of medicine.

I want to appeal to you that if you have any desires that you would like to have brought before the American Medical Association, which actions will be mistakenly taken by the public and by our doctors and by the medical students as being wrong, that if you have any ideas at all as to how to remedy this or how it should be brought out, we wish you would bring it before this body for them to direct us as to what they want us to do.

Secondly, as individuals I wish you would carry it to any member of the Medical Association of this state that they, as individuals, have free access to your delegates which you send to the American Medical Association, and we solicit your ideas.

We hope you will help us. Our job is hard. I want you to know that we are going back there; we are going to do what you want us to do to the best of our ability, and I want to thank you very much. (Applause.)

SPEAKER ALESEN: Other special committees. Physicians' Benevolence Committee. Dr. Axcel E. Anderson.

DR. AXCEL E. ANDERSON: No further report.

SPEAKER ALESEN: Advisory Planning Committee, John Hunton.

SECRETARY JOHN HUNTON: No additional report.

SPEAKER ALESEN: C.P.S. Liaison Committee, Dr. Donald Cass.

REPORT OF C.P.S. LIAISON COMMITTEE

DR. DONALD CASS: Mr. Speaker: This committee meeting was too late to get the report into the Pre-Convention Bulletin.

The C.P.S. Liaison Committee was formed on instructions from the House of Delegates a year ago for the purpose of considering and advising as a liaison group between C.M.A. and C.P.S. on questions of policy and other important articles of business. Memberships consist of the President of C.M.A., President-Elect of C.M.A., President of C.P.S., Chairman of the Council of C.M.A., Chairman of the Legislative Committee of C.M.A., and two members to be elected from the House of Delegates.

This committee met in February 1951 and unanimously approved the action of the Board of Trustees in recommending a $4,800 income ceiling level and also approved the Fee Schedule submitted by the Fee Schedule Committee.

SPEAKER ALESEN: This will be referred to Reference Committee No. 1.

Committee on C.P.S. Administrative Changes, Orrin Cook.

DR. ORRIN COOK: No further report.

SPEAKER ALESEN: Committee on Industrial Accident Commission Fee Schedule, Francis J. Cox.

DR. FRANCIS J. COX: No further report.

SPEAKER ALESEN: Committee on Industrial Health, Christopher Leggo.

DR. CHRISTOPHER LEGGO: No further report.

SPEAKER ALESEN: Committee on Rural Medical Service, Carroll B. Andrews.

DR. CARROLL B. ANDREWS: No further report.

SPEAKER ALESEN: This concludes the old business.

We will now turn to new business, and ask the Vice-Speaker, Dr. Charnock, to take the chair.

VICE-SPEAKER CHARNOCK: Under new business you are at this time privileged to present your resolutions, and we will have each delegate come forward and state his name and county and be prepared to present three copies of the proposed resolutions or changes to the section.

There is no discussion on these resolutions at this time. They will be referred to the appropriate committee.

We are now open for new business. Does anyone wish to present any resolution?

Resolution No. 1

DR. ORRIS MYERS (Humboldt County): A resolution to recommend increased diagnostic procedures allowable in doctors' offices by prepaid health insurance plans:

WHEREAS, It is the policy of the California Physicians' Service and of the many health insurance companies to give more coverage for x-ray and laboratory services on registered bed patients in a hospital than on ambulant cases; and

WHEREAS, Physicians are encouraged to place

patients in the hospital for diagnostic studies who could be handled as ambulant cases; and

WHEREAS, The expense of such diagnostic service is thus greatly increased; and

WHEREAS, Hospital beds for bona fide hospital cases are thus made unavailable; and

WHEREAS, This increased cost to the patient results in increased health insurance premium rates, waste of man hours by both employer and employee, and wastes urgently needed hospital space; and

WHEREAS, There has been no apparent effort during the past year on the part of the insurance companies to correct or alter policies to avoid unnecessary hospitalization; now, therefore, be it

Resolved, That the California Medical Association go on record as recommending that all prepaid health insurance companies give office and ambulant cases more coverage for diagnostic procedures in order to eliminate and prevent this growing trend of unnecessary increased hospitalization.

VICE-SPEAKER CHARNOCK: That will be referred to Reference Committee No. 3.

Dr. Justin Stein of Los Angeles County.

Resolution No. 2

DR. JUSTIN J. STEIN (Los Angeles County):

WHEREAS, May 19, 1951, has been proclaimed Armed Forces Day by the President of the United States, as an occasion for honoring the men and women who serve as "Defenders of Freedom," and for renewing the nation's faith in the ideals of peace and freedom which their united efforts will help preserve; and

WHEREAS, The members of the California Medical Association have always rendered the best possible medical care to the Armed Forces and the civilian population; now, therefore, be it

Resolved, That the Secretary of the California Medical Association be instructed to send telegrams to the President of the United States and to the Secretary of Defense that the members of the California Medical Association are wholeheartedly in support of the aims and ideals for which Armed Forces Day was designed.

The members of this Association wish to go on record that they will always maintain the highest standards of medical care for the Armed Forces and the civilian population in time of war and peace.

VICE-SPEAKER CHARNOCK: Thank you. That will be referred to Reference Committee No. 3.

Dr. Ralph Teall.

Resolution No. 3

DR. RALPH TEALL (Sacramento County):

WHEREAS, The House of Delegates of the American Medical Association, at its San Francisco session in June 1950 reexamined the principle of medical ethics that "a physician should not dispose of his services to any hospital, corporation or lay body, by whatever name called or however organized, under terms or conditions that permit the sale of the services of that physician by such agency for a fee"; and

WHEREAS, The House of Delegates at the same time reaffirmed that radiology, pathology, physical medicine and anesthesiology are all integral parts of the practice of medicine; and

WHEREAS, Any physician who performs professional services for a hospital on a salary basis (except solely for teaching, research or actual charitable purposes) for which the hospital charges fees to the public that are unrelated to the salary of such physician, is ignoring the Principles of Medical Ethics of the American Medical Association and the California Medical Association; and

WHEREAS, The enforcement of the Principles of Medical Ethics is primarily the task of the county medical societies; now, therefore, be it

Resolved, By the California Medical Association that each component society be advised to reexamine the practices of its own members in this regard, and to take appropriate measures to eliminate any violation of this ethical principle by assigning this important problem to an appropriate committee for study and action.

VICE-SPEAKER CHARNOCK: Dr. Teall's resolution is referred to Reference Committee No. 3.

Dr. Carson of San Francisco.

Resolution No. 4

DR. DONALD CARSON (San Francisco County):

Be it Resolved, That the new California Physicians' Service fee schedule as was published does not represent an adequate over-all fee schedule, either minimum, average or maximum, for practice in the State of California in 1951, and, be it further

Resolved, That the House of Delegates of the California Medical Association instruct the Council of the California Medical Association to withdraw its approval of said fee schedule and direct a fee schedule committee to continue its work in the field of attempting to find an adequate over-all fee schedule.

VICE-SPEAKER CHARNOCK: This goes to Reference Committee No. 3.

Dr. Donald Carson.

Resolution No. 5

DR. DONALD CARSON (San Francisco County):

Be it Resolved, That the Council of the California Medical Association be instructed to direct the legal counsel to prepare and direct an educational campaign among the members of the California Medical Association on the subject of restraint of trade, to instruct physicians to be better able to carry on their own businesses and activities in county medical societies in accordance with what are called anti-trust acts, and, be it further

Resolved, That the Council of the California Medical Association shall instruct the editor of the Journal of CALIFORNIA MEDICINE to furnish the required space in the Journal for said procedure.

VICE-SPEAKER CHARNOCK: This is referred to Reference Committee No. 3.

Dr. Carson.

Resolution No. 6

DR. DONALD CARSON (San Francisco County):

WHEREAS, United effort on the part of the medical profession in the State of California toward its objectives is essential; and

WHEREAS, From one large county medical society the following questionnaire and answers were obtained:

QUESTIONNAIRE AND RESULTS

	Yes	*No*
Is the new C.P.S. fee schedule (if 100 per cent payment) adequate in your practice as a guide to over-all private practice fees?	349	401
Is this new fee schedule at 60 per cent unit value adequate in your C.P.S. practice under the $3,600 a year bracket?	151	564
Do you favor:		
(a) Continuation of the present unit value payment plan for services rendered to those C.P.S. patients above the $3,600 a year bracket?	180	408
or		
(b) A specified sum for each service rendered according to an indemnifying schedule on C.P.S. patients above the $3,600 a year bracket?	474	130
Do you favor an increase of the income bracket above $3,600 a year in C.P.S.?	162	539
An increase to $4,200?	124	343
An increase to $4,800?	102	373
Do you favor promotion of the unit value type of service plan such as C.P.S.?	250	407
Do you favor promotion of the other form of voluntary insurance—free choice of physician, medical payment insurance—namely, indemnification insurance?	586	107
In your opinion is the purpose of C.P.S.		
(a) To provide adequate medical care for individuals in low income brackets?	557	106
(b) To provide voluntary health insurance for the greatest possible number of individuals without regard to income status?	261	357

What is the estimated percentage of C.P.S. patients in your total practice?	10%	563	40%	11
	20%	158	50%	9
	30%	60	75%	1
(2%–1) (5%–5) (15%–2)				
What is the estimated percentage you could treat and still stay in practice?	10%	158	40%	33
	20%	169	50%	83
	30%	118	75%	10
			100%	24

and

WHEREAS, Mailed questionnaires to members of the California Medical Association is excellent method of gaining statistical information; now, therefore, be it

Resolved, That the Council of the California Medical Association use this method of obtaining the opinion of the profession.

VICE-SPEAKER CHARNOCK: That will be referred to Reference Committee No. 3.

Constitutional Amendment

DR. DONALD CARSON (San Francisco County): A constitutional amendment:

Resolved, Sub-paragraph (c) of Section 9, Part B, of Article III of the Constitution be amended to read as follows:

(c) The President, President-Elect, Speaker and Vice-Speaker.

VICE-SPEAKER CHARNOCK: This will lie upon the table.

Resolution No. 7

DR. DONALD CARSON (San Francisco County): Another amendment to the By-Laws:

Resolved, That the following be added to Chapter XIII, Section 1, as a third paragraph:

A member shall not refer his patients for diagnostic or other procedures to a laboratory or to another physician under such circumstances that a member receives, either directly or by way of a credit or charge account or otherwise, any reward or remuneration on account of such referral.

VICE-SPEAKER CHARNOCK: This amendment to the By-Laws will be referred to Reference Committee No. 3.

At the present moment we have no By-Laws, and we are going to vote on them mañana. So, they will be referred to Reference Committee No. 3 for their opinion.

Do we have any more?

Resolution No. 8

DR. ALBERT G. MILLER (San Mateo County):

WHEREAS, Medical fee schedules are based on estimates and developed more from custom and usage than fact; and

WHEREAS, A sound fee schedule under any insurance program must take into account the cost of all services rendered by physicians; and

WHEREAS, No such analysis of the actual cost of physicians' services has ever been undertaken, including the cost of ordinary overhead; now, therefore, be it

Resolved, That a thorough cost accounting survey of said professional services in California be secured at a cost not to exceed $250,000.

VICE-SPEAKER CHARNOCK: We will refer that to Reference Committee No. 2.

Resolution No. 9

DR. WENDELL OLSON (Orange County): On behalf of the Orange County delegation I wish to present this resolution:

WHEREAS, The Department of Rehabilitation of the California State Department of Education has specifically instructed its personnel to refer their corrective and rehabilitative surgical problems only to those surgeons who have been certified by the American Board of Surgery; and

WHEREAS, The American Medical Association has published on pages 149 and 170 of Volume 144,

No. 2, September 9, 1950, the following statement:

"The American Board of Surgery has never been concerned with measures that might gain special privileges or recognition for its certificants in the practice of surgery. It is neither the intent nor has it been the purpose of the Board to define requirements for memberships on the staffs of hospitals. The prime object of the Board is to pass judgment on the education and training of broadly competent and responsible surgeons, not who shall or shall not perform surgical operations. The Board specifically disclaims interest in, or recognition of, differential emoluments that may be based on certification"; and

WHEREAS, This discrimination by the Department of Rehabilitation of the California State Department of Education is not for the best interests of the ethical practice of surgery by equally skilled and experienced practitioners of the science and art of surgery; now, therefore, be it

Resolved, That this Association, through its proper representative, request the Department of Rehabilitation of the California State Department of Education to desist from its expressed discriminatory policy and instruct them to obtain a list of qualified surgeons and specialists in related surgical specialties from the local county medical association in that area wherein such rehabilitative and corrective surgery is authorized at the expense of the State of California.

VICE-SPEAKER CHARNOCK: That resolution is referred to Reference Committee No. 3.

Resolution No. 10

DR. BURT L. DAVIS (Santa Clara County):

WHEREAS, There are many naval and military posts in California located within reasonable distances of established civilian medical facilities; and

WHEREAS, The personnel in these military posts frequently maintain their families in these neighboring communities; and

WHEREAS, A considerable portion of the time of the medical departments of the armed services is required in attending to the dependents of the military personnel and not to active military problems; and

WHEREAS, California Physicians' Service is ideally adapted for entering into a contract with the armed forces to render medical attention to these dependents; and

WHEREAS, Such a contract would efficiently conserve the use of medical personnel within the armed forces and thereby lessen the need for greater expansion of the military program; and

WHEREAS, Similar contracts with the Veterans Administration and with the agricultural workers, to name but two, have established the propriety and precedence for the custom of governmental agencies contracting with California Physicians' Service for medical care; now, therefore, be it

Resolved, That the House of Delegates of the California Medical Association encourage, authorize and request the California Physicians' Service to enter into negotiation with the armed forces for contracts whereby the families and dependents of military personnel may be cared for as private patients in the proper fashion by the civilian physicians in the neighboring communities in which they reside within this state; and, be it further

Resolved, That the California Medical Association call the attention to this program of the various other state and national physicians' health plans in order that they be encouraged to enter into similar arrangements.

VICE-SPEAKER CHARNOCK: This resolution will be referred to Reference Committee No. 1.

Resolution No. 11

DR. BURT L. DAVIS (Santa Clara County):

WHEREAS, It is now necessary for a licensed physician and surgeon to obtain formal notarization for narcotics records; and

WHEREAS, It has become an established practice in certain governmental documents, the income tax forms, for example, to replace the requirement for notarization by statements subjecting the signator to the penalties for perjury; and

WHEREAS, These records should not require such formality; now, therefore, be it

Resolved, That the California Medical Association delegates to the American Medical Association House of Delegates be instructed to introduce a resolution in that body directing the American Medical Association to seek legislation and/or administrative relief for this annoying obsolete practice. (Applause.)

VICE-SPEAKER CHARNOCK: Referred to Reference Committee No. 3.

Resolution No. 12

DR. BURT L. DAVIS (Santa Clara County):

WHEREAS, It is good accounting practice for business organizations to establish the costs required to create the going concern and to depreciate this capital initial cost over an appropriate period; and

WHEREAS, This procedure has met with the approval of the Department of Internal Revenue and is customary; and

WHEREAS, The costs of a professional education are dispersed over a period of years during which there is no income to offset these costs; and

WHEREAS, These costs represent a capitalization charge which thus constitutes a taxable loss to the individual; and

WHEREAS, All occupational training expenses are now neglected in this fashion, now, therefore, be it

Resolved, That the California Medical Association delegates to the American Medical Association be instructed to seek appropriate legislation to authorize the establishment for tax purposes of the costs of all technical and professional training to be amor-

tized over an appropriate period. (Laughter and applause.)

VICE-SPEAKER CHARNOCK: Referred to Reference Committee No. 3.

Resolution No. 13

DR. BURT L. DAVIS (Santa Clara County):

WHEREAS, The members of the California Medical Association have promoted the care for crippled children; and

WHEREAS, The promotion of these services should be expanded within the medical profession; and

WHEREAS, The present lay administrative policy causes disinterest, nay, even hostility, to arise among the family physicians who should be the most enthusiastic supporters of the program; and

WHEREAS, This dissension within the profession is not only disadvantageous to the profession but also defeats many of the purposes for which the Crippled Children legislation was originally enactcd; now, therefore, be it

Resolved, That this House of Delegates of the California Medical Association disapprove of the interpretation of the Crippled Children Act as it is now directed, in particular the establishment of categories of physicians and surgeons who may or may not attend beneficiaries under the act; and, be it further

Resolved, That the California Medical Association advise the lay directors in the interpretation of the act that the license to practice medicine and surgery, as granted by the state, establishes no classification or further qualification upon the right to practice.

VICE-SPEAKER CHARNOCK: This is referred to Reference Committee No. 3.

Resolution No. 14

DR. BURT L. DAVIS (Santa Clara County):

WHEREAS, An analysis of the appropriations for the California Crippled Children Act clearly shows that approximately 95 per cent of the costs are borne by the state and the localities; and

WHEREAS, the federal appropriation establishes certain restrictions on the use of the entire funds so appropriated. local and state as well as federal; and

WHEREAS, Many physicians find these restrictions abhorrent and monopolistic in nature; now, therefore, be it

Resolved, That this House of Delegates call public attention to this disproportionate condition and instruct the Council of the California Medical Association to advocate if necessary the state and local governments conduct these programs themselves without federal assistance.

VICE-SPEAKER CHARNOCK: This will be referred to Reference Committee No. 3.

Resolution No. 15

DR. BURT L. DAVIS (Santa Clara County):

WHEREAS, It has been the custom for various medical schools within this state to solicit contributions from their alumni for new endowments and for maintenance and research expense; and

WHEREAS, One of the main obstacles in the way of rccciving these funds has been the inertia of the individual donor; and

WHEREAS, It is imperative that the alumni of medical schools at this timc in order to prevent the infiltration of federal money and federal domination, or state money and state domination, to assist in every way possible, particularly financially, the privately endowed medical colleges; now, therefore, be it

Resolved, That the House of Dclegates establish the custom that members of the California Medical Association must remit with their yearly dues to their county medical society a receipt from a medical school in California acknowledging a donation to the medical school without specifying the amount, except that it be in excess of $10. Should the individual members not wish to make a specific donation to any one California medical school they shall add at least $10 to their dues, this $10 to be contributed to a fund established by the California Medical Association for assistance of medical education.

VICE-SPEAKER CHARNOCK: This will go to Reference Committee No. 3.

Resolution No. 16

DR. BURT L. DAVIS (Santa Clara County):

WHEREAS, Advances in medical knowledge in recent years have extended to the point where the costs of research and education have mounted at an alarming rate; and

WHEREAS, The costs of operation and maintenance in the various medical schools have similarly increased; and

WHEREAS, The income derived from endowment, investments and contributions to medical schools has diminished as a result of these increased costs; and

WHEREAS, The general public is being bombarded with information advocating federal subsidy of medical education; and

WHEREAS, In desperation many of our leading medical schools may be forced to accept this federal aid and thereby dance to the tune the piper plays; and

WHEREAS, All practicing physicians and members of the California Medical Association are vitally interested not only in the prevention of medical subsidy and governmental domination of medical education but also in the furtherance of frce, private enterprise in medical education; now, therefore, be it

Resolved, That the House of Delegates of the California Medical Association establish a fund, the moneys of which shall be kept separate and without profit to the California Medical Association, for the purpose of collecting contributions which in turn shall be used by the Council for contributions to

medical schools within this state and/or to similar funds established by the American Medical Association: and, be it further

Resolved, That California Medical Association encourage by this resolution and by publicity thereupon and by active solicitation contributions from practicing physicians and donations made through the estate of physicians who have benefited by the presence of these medical schools; and, be it further

Resolved, That any layman or lay organization who wishes to contribute to this fund be encouraged to do so to the fullest extent.

VICE-SPEAKER CHARNOCK: This will be referred to Reference Committee No. 3.

Resolution No. 17

DR. BURT L. DAVIS (Santa Clara County):

WHEREAS, It would be mutually advantageous for medical profession and medical students to have the opportunity to interchange ideas and opinions; now, therefore, be it

Resolved, That the House of Delegates of the California Medical Association desire that arrangements be made to send a copy of CALIFORNIA MEDICINE to each registered student in the state of California.

VICE-SPEAKER CHARNOCK: This will be referred to both Reference Committee No. 2 and Reference Committee No. 3. Both committees will act upon this resolution.

Resolution No. 18

DR. LEON PARKER (San Francisco County):

Be It Resolved, That the House of Delegates of the California Medical Association instruct the Council of the California Medical Association to set up a Board of Approval of voluntary health insurance; and, be it further

Resolved, That the Council of the California Medical Association shall elect five (5) of its own members to be the directors of such a board, and that such board shall be furnished with the necessary executive, clerical, and statistical force to operate; and, be it further

Resolved, That the classes of voluntary health insurance shall be A, B, and C; and, be it further

Resolved, That Class A shall consist of those forms of health insurance, or policies that permit free choice of physician, and are able to furnish service or indemnity according to a schedule that will fulfill its aims and claims; and, be it further

Resolved, That Class B shall be those forms of health insurance, or policies, or plans that do not give free choice of physicians, but that do fulfill other tenets in Class A; and, be it further

Resolved, That Class C shall be those forms of insurance, or policies, or plans, that neither give free choice of physician or fulfill the other tenets set forth in Classes A and B; and, be it further

Resolved, That any insurer who wishes to be classified must apply for his approval, furnish all necessary information and agree that approval may be withdrawn if it is shown that he has misrepresented himself in his application or makes changes during the time of approval that make the facts contrary to what they were at the time of approval.

VICE-SPEAKER CHARNOCK: This is referred to Reference Committee No. 3.

Resolution No. 19

DR. WILBUR BAILEY (Los Angeles County): This resolution has the interest of the Board of Medical Examiners and our own Legislative Department.

RESOLUTION REGARDING REGISTRATION OF PSYCHOLOGISTS

WHEREAS, Properly trained psychologists with high ethical standards who work under the guidance of doctors of medicine render a genuine public service; but

WHEREAS, There are a host of other individuals partly or completely untrained who pose as psychologists; and

WHEREAS, State licensing might seem a ready answer to stopping these "mind meddlers" whose talents range from bunco to blackmail, such licensing has two big disadvantages: (1) Nearly anyone who has worked as a so-called psychologist for three years would be "blanketed in" under "grandfather" clauses in some of the bills which are proposed; (2) licensing boards and licensing laws after passing through the process of legislative amendments and revisions frequently turn out very differently than expected; and

WHEREAS, Numerous conferences between members of the Board of Medical Examiners and various groups of university-trained psychologists reveal that these ethical psychologists wish to work under the guidance of properly licensed physicians and surgeons; now, therefore, be it

Resolved, That the House of Delegates of the California Medical Association instruct its Council to consider the problem of giving such psychologists appropriate recognition and registration in the California Medical Association and its branches; and, be it further

Resolved, That a plan of registration under the Board of Medical Examiners, such, perhaps, as the properly trained physiotherapists are presently proposing in bills before the Legislature, be considered as being appropriate for the psychologists; and, be it further

Resolved, That the House of Delegates place itself firmly on record as being against the formation of an additional Board of Psychologists, or any plan of licensing under such a board.

VICE-SPEAKER CHARNOCK: That will be referred to Reference Committee No. 3.

Do we have any more resolutions to present to the House?

Constitutional Amendments

DR. E. T. REMMEN (Los Angeles County): Mr. Speaker, there are a few points in the new Constitu-

tion which some members of the committees who studied the constitutions for two years feel should be separately presented to the House of Delegates in order that they may be considered next year. They are very brief:

Be It Resolved, That Article III, Part A, Section 1 of the Constitution be amended to read as follows:

The House of Delegates shall consist of

(a) Delegates elected by the members of component societies as provided in the By-Laws;

(b) Officers of the Association as designated in Article VI, Section 1 of this Constitution. Excepting the Secretary-Treasurer and the Editor, they shall have the right to vote.

Anything in the Constitution and By-Laws which is in conflict with the foregoing is hereby repealed.

That is separating the Council from the House of Delegates.

VICE-SPEAKER CHARNOCK: This amendment to the Constitution will be placed upon the table.

DR. E. T. REMMEN: The second amendment:

Be It Resolved, That Article III, Part B, Section 9 of the Constitution be amended to read as follows:

(a) District Councilors shall be elected by vote of the delegates from each district in the manner and at the time specified in the By-Laws.

Paragraph (b) is hereby repealed, except that the present Councilors-at-large shall complete their terms.

Anything in the Constitution and By-Laws in conflict with the foregoing is hereby repealed.

Thereby abolishing the office of Councilor-at-large.

VICE-SPEAKER CHARNOCK: This again will be laid upon the table.

DR. E. T. REMMEN: The third one:

Be It Resolved, That Article III, Part B, Section 9 of the Constitution shall be amended to read as follows:

The Council shall consist of:

(a) Eleven District Councilors elected from the Councilor districts specified in this Constitution.

(b) The President, President-Elect and Speaker. In addition the Secretary-Treasurer and Editor, but without the right to vote.

Anything in the Constitution and By-Laws which is in conflict with the foregoing is hereby repealed.

Again removing the Councilor-at-large.

VICE-SPEAKER CHARNOCK: Again this is an amendment to the Constitution. It will lie on the table.

DR. E. T. REMMEN: The fourth one is merely an addition to Article IV, Section 5 of the Constitution of one clause.

Be It Resolved, That Article IV, Section 5 of the Constitution be amended to read as follows:

"At each regular session of the House of Delegates the Council shall submit to it an itemized budget stating the proposed expenditures of the Association for the ensuing year. The budget may be altered or revised by the House of Delegates, but must be adopted by the House before adjournment of the session. After its adoption no expenditures in excess of the amount of the budget item covering the subject of such expenditures may be made in the year covered by the budget by the Association or any of its officers, agents or employees unless the Council by a three-fourths vote of all voting members shall first approve such excess expenditure by resolution duly adopted, and further provided that in no instance may the Council expend funds in any fiscal year in excess of 25 per cent more than the total amount of the budget without permission of the House of Delegates. Recurring items in the budget (fixed expenditures covering more than one year) shall, when first adopted, be binding as to the subsequent budgets to the extent of commitments or obligations entered into by the Association within authority granted by the House of Delegates or this Constitution or the By-Laws.

Merely a remote safeguard on funds, looking forward to a Constitution that may last for 50 years.

A MEMBER: Mr. Speaker, a point of order.

VICE-SPEAKER CHARNOCK: What is it?

SAME MEMBER: Is this a discussion or resolution?

VICE-SPEAKER CHARNOCK: The resolution has been read as such. It was read in brief and the chair rules this is to be laid on the table.

Now, do we have any more resolutions or amendments?

Resolution No. 20

DR. L. C. BURWELL (Los Angeles County): Mr. Speaker, members of the House of Delegates: This resolution originated in the general practice section of the Los Angeles County Medical Association. I brought this resolution to the Los Angeles County Medical Association and it was passed at the last meeting. Therefore, I am passing it on from them to you.

WHEREAS, The Department of Social Welfare of the State of California is a well organized functioning department in our state government; and

WHEREAS, This department establishes standards and makes minimum regulations which must be met by all adopting agencies; and

WHEREAS, The Department in its adoption manual has stated that children in adopted homes during their probationary time should be under the care of a qualified physician, "preferably a pediatrician"; and

WHEREAS, Some adoption agencies in the State of California have required the prospective foster parents to call on a pediatrician to care for the child during that probationary time; and

WHEREAS, In so doing the agencies are not only exceeding the requirements laid down by the State Department of Social Welfare but are discriminating against physicians in general practice and, as a result, deny to the adoptive parents the right of free choice of physician; now, therefore, be it

Resolved, (1) That this House of Delegates of the California Medical Association instruct the Council to ask the Department of Social Welfare of the State of California to delete from its manual the phrase, "preferably a pediatrician," and (2) that the Department of Social Welfare be requested to advise all adoption agencies in the State of California of such deletion from their manual; and to recommend to the agencies that any doctor licensed to practice medicine by the State of California be privileged to care for said children.

VICE-SPEAKER CHARNOCK: This will be referred to Reference Committee No. 3.

Now, do we have any more resolutions to present? This is your last opportunity to present resolutions and amendments. We will now have a motion to adjourn for the adjourned meeting tomorrow at 3:00 o'clock at the Edison Building.

. . . It was moved, seconded, and carried that the meeting be adjourned at 5:00 o'clock p.m. . . .

MONDAY AFTERNOON SESSION
MAY 14, 1951

The Monday Afternoon Session was held in the Auditorium of the Southern California Edison Building, and was called to order at 3:00 p.m. by Vice-Speaker Donald Charnock, who presided.

VICE-SPEAKER CHARNOCK: Will the House of Delegates please be in order.

Will Dr. Morrison please come forward.

DR. A. A. MORRISON (Ventura County): Mr. Speaker, there are now 144 delegates seated. This constitutes a quorum under the new Constitution.

We also passed out cards and had you bring them in. If any of those cards were not signed, will you please sign them and pass them over to one of the aisles so that we can pick them up?

VICE-SPEAKER CHARNOCK: The first order of business is the roll call.

. . . Roll call. . . .

VICE-SPEAKER CHARNOCK: We declare that the House is now in good order.

The first order of business is a report by Dr. Lyle Craig, Chairman of Reference Committee No. 3. Dr. Craig!

DR. LYLE CRAIG: This adjourned session of the House of Delegates is for the express purpose of voting on the By-Laws and receiving amendments thereto. The By-Laws which are to be voted on are those as published in the Annual Reports Bulletin, of which some of you may yet have a copy, plus the changes which were introduced yesterday by Reference Committee No. 3, and we are presently laying on the table, plus the changes which were added to the Report of the Committee by your action of yesterday, which changes are also lying on the table and have been incorporated as a part of these By-Laws by your action.

The first of these changes, as you will note on the slips handed you today, is concerned with Chapter V, Section 2.

"Commencing with the 1952 regular session of the House of Delegates each component society shall be entitled to one delegate for each fifty (50) active members or major fraction thereof, according to its membership as of the first day of November of the preceding year; provided, however, that each component society shall be entitled to a minimum of two delegates."

Chapter VII, Section 1, page 44:

"Insert after the line '(l) Physicians' Benevolence Committee' the new line '(m) Military Affairs and Civil Defense.'"

The ensuing line being renumbered "n" instead of the present "m."

Also to insert in Chapter VII a new section to read:

"Section 20—Committee on Military Affairs and Civil Defense.

"The Committee on Military Affairs and Civil Defense shall have the duty and responsibility to consult with constituted authorities concerning these subjects and administer problems of civil defense and of a military nature for the California Medical Association."

The ensuing sections of Chapter VII have been renumbered Section 21 and Section 22 respectively.

This, then, is the document upon which we are asked to vote.

Mr. Speaker, I move the adoption of the By-Laws as presented to the House.

VICE-SPEAKER CHARNOCK: Thank you, Dr. Craig.

At this time there will be an opportunity for any member of the House of Delegates to debate this set of By-Laws.

. . . The motion was seconded. . . .

VICE-SPEAKER CHARNOCK: Does anybody want to debate these?

. . . The question was called for. . . .

VICE-SPEAKER CHARNOCK: Nobody wants to debate it. That is fine.

DR. FRANCIS T. HODGES (San Francisco County): Mr. Speaker, a point of order.

VICE-SPEAKER CHARNOCK: What is your point of order?

DR. FRANCIS T. HODGES (San Francisco County): Is this the proper time for amendments to these?

VICE-SPEAKER CHARNOCK: No, sir. If you please, we will announce that in just a moment. At this time the order of business will be a vote upon this existing instrument. Later on there will be an opportunity of putting forth amendments to the By-Laws.

At the present time the order of business is to vote upon this instrument as has been presented by Dr. Craig. How do you wish to vote?

. . . There were calls of acclamation. . . .

VICE-SPEAKER CHARNOCK: Will somebody make a motion to that effect?

. . . It was moved, seconded and carried that the vote be by acclamation. . . .

VICE-SPEAKER CHARNOCK: We will then vote by acclamation. The vote is now upon the By-Laws as proposed by Dr. Craig. All those who are in favor of these By-Laws will signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

VICE-SPEAKER CHARNOCK: They are passed and so recorded.

At this time there is an opportunity to present amendments to the Constitution and the By-Laws. As there is no advantage in presenting amendments to the Constitution at this time, the chair will rule that they will be put over until tomorrow.

It is now the time when you may present amendments to this present existing new By-Laws.

DR. A. G. MILLER (San Mateo County): Without reading any "whereases" on the matter, it pertains to the portion of the By-Laws under letter "K" that Dr. Craig just read to you. The resolved portion in this particular Section 2 of Chapter V, that in the phrase "major fraction thereof" the word "major" be struck out and the word "any" be substituted.

VICE-SPEAKER CHARNOCK: This will be referred to Reference Committee No. 3 and will be reported back tomorrow.

DR. A. A. KIRCHNER (Los Angeles County): Mr. Chairman, if you will turn to your Bulletin, page 41, the right lower column which has to do with the provisions requiring two House of Delegates meetings per year, this is an amendment correcting that.

Resolved, That the By-Laws of this Association, the California Medical Association, adopted on May 14, 1951, be and the same are hereby amended as follows:

(1) Section 7 of Chapter V is hereby amended to read:

"Section 7—Sessions and Meetings

"(a) In each year there shall be a regular session of the House of Delegates (herein at times called the Annual Session); the time and place of such regular session to be determined by the Council as far as possible in advance and notice thereof published in the journal of the Association.

"(b) In addition to regular sessions, special meetings of the House of Delegates may be called at any regular or special meeting of the Council, by a two-thirds vote of all the members of the Council, or by written call stating the object of the meeting, filed with the Secretary in the office of the Association and signed by one-half or more of the members of the House of Delegates. Upon the filing of such call with the Secretary, the Council shall within 30 days thereafter fix the time and place for the holding of such special meeting and cause written notice thereof stating the object of the meeting to be sent by United States mail, postage fully prepaid, to each member of the House of Delegates, addressed to him at his office or place of residence, as shown by the records of the Secretary's office, at least 15 days prior to the date of such meeting."

Now, on page 42, I refer you to Section 9. In order to streamline the By-Law to fit with this resolution Section 9 of Chapter V is amended to read:

"Section 9—Membership of Credentials and Reference Committee.

"Each of the aforesaid committees shall consist of three members, the chairman of each to be designated by the Speaker.

"The Speaker, the House concurring, shall refer said reports, resolutions, and business to the respective Reference Committees, but may allocate among them any of said reports, resolutions or portions thereof, and other business, to avoid duplication and to expedite the business of the House of Delegates.

"Each Reference Committee shall prepare a written report dealing with and making recommendations on all matters submitted to it. The report of each committee may be acted upon as a whole or section by section, as the House may determine."

VICE-SPEAKER CHARNOCK: Thank you, Dr. Kirchner. These will be referred to Reference Committee No. 3 for action tomorrow.

Dr. de los Reyes!

DR. J. M. DE LOS REYES (Los Angeles County): Mr. Speaker:

Resolved, That the By-Laws of this Association, California Medical Association, adopted May 14, 1951, are hereby amended as follows:

(1) Add to Chapter V a new Section 12 reading as follows:

"Section 12—Loyalty.

"The Committee on Credentials shall require each delegate and alternate who desires to be seated as a member of the House of Delegates to subscribe to the oath or affirmation in the form required for officers under Section 3 of Chapter XIII. In the event of refusal to subscribe to such oath, the Credentials Committee may at its discretion refuse to include such person in its written report to the House of Delegates designating the delegates and alternates entitled to membership therein. Any person refused a seat by action of the Credentials Committee shall have the right to appeal to the House and by majority vote the House may overrule the Credentials Committee and seat such person as a delegate."

(2) Add to Chapter XIII a new Section 3 reading as follows:

"Section 3—Oath of Office.

"All officers and employees of the Association, upon election or appointment, shall subscribe to an oath or affirmation as follows:

" 'I do not belong and have not belonged to any organization advocating the overthrow or change of the form of government of the U. S. A. by violent or unlawful means, nor do I belong or have belonged to any organization while it was listed, published or held to be subversive by the Department of Justice of the United States of America.' If, after full hearing, the Council shall find that an officer or employee falsely subscribed to the oath or affirmation,

it may in its discretion remove the officer or employee from his office or position and fill the vacancy so created."

VICE-SPEAKER CHARNOCK: This will be referred to Reference Committee No. 3 for action.

DR. JOHN W. GREEN: Mr. Speaker, members of the House: Representing the Council in a duty which has to be performed annually, we have already run into a little bit of difficulty with your new set of By-Laws in selecting names to present to the House for the various standing committees. We find that in at least one instance the chairman of the committee who has served us faithfully through many years, to wit, Dr. Murray, would not like to see this read as it is now written, because it would require him to throw off of his committee one of his most trusted lieutenants and put an untrusted Councilor in his place. (Laughter.)

So, in that connection I would like to offer this change in the By-Laws. Chapter VII, Section 2:

This resolution is to amend Chapter VII, Section 2 of the By-Laws, as printed on page 44 of the Annual Reports Bulletin.

WHEREAS, It would appear inappropriate that a member of the Council always be a member of a standing committee; now, therefore, be it

Resolved, That the word "shall" in line three of the first sentence be changed to "may" and the first sentence shall thereafter read as follows:

"Unless otherwise provided in these By-Laws, each of the standing committees (except House of Delegates Reference Committees) may consist of one member of the Council and two other members."

VICE-SPEAKER CHARNOCK: Thank you, Dr. Green.

Do you have any more changes in these By-Laws? Dr. Parker!

DR. LEON PARKER (San Francisco County):

Be It Resolved, That Chapter V, new Section 12, shall read:

"All officers, delegates and alternates shall take the following oath of allegiance:

" 'I pledge allegiance to the flag of the United States of America,
And to the Republic for which it stands,
One nation indivisible,
With liberty and justice for all.' "

VICE-SPEAKER CHARNOCK: Thank you, Dr. Parker. That will be referred to Reference Committee No. 3.

Does anybody else have amendments? There are no more, I guess.

At this time the Speaker is instructed to have the delegates gather around their various district placards for the purpose of electing District Councilors. If you will refer to Section 6, Chapter VIII of the new By-Laws on page 47 of the Annual Reports Bulletin, "At least twenty-four hours prior to the second meeting at each annual session of the House of Delegates the delegates from those districts in which Councilor vacancies are about to occur shall separately meet, and in each district the delegates shall elect a chairman and a secretary. At such caucus the delegates in each district shall by nomination, secret ballot and majority vote of the delegates present elect a District Councilor from such district to serve for the ensuing term."

For your convenience, as this is the first time this has been done under this new set of By-Laws, we have arranged these placards where you can get together.

A motion to adjourn is now in order, and then you can select your District Councilors.

. . . It was moved, seconded and carried that the meeting be adjourned at 4:00 o'clock p.m.

TUESDAY AFTERNOON SESSION
MAY 15, 1951

The Tuesday Afternoon Session was held in the Music Room of the Biltmore Hotel, and was called to order at 1:00 p.m. by Speaker Lewis A. Alesen, who presided.

SPEAKER ALESEN: Will the House of Delegates please come to order.

Dr. Morrison!

DR. A. A. MORRISON: Mr. Speaker, we now have 147 delegates seated. This constitutes a quorum under the new Constitution.

SPEAKER ALESEN: Mr. Secretary, shall we proceed with the roll call?

. . . Roll call. . . .

SPEAKER ALESEN: At this time, as you know, we are about to hear the inaugural address of our incoming President, Dr. H. Gordon MacLean. The firm of Whitaker and Baxter has taken care of our radio talks in the past. They took care of Dr. Henderson's address last year. The gentleman responsible for the success of that broadcast is with us to take charge of our broadcast today. He is one of the members of the firm of Whitaker and Baxter, Mr. Ned Burman, who will instruct us as to how to proceed. Mr. Burman!

MR. NED BURMAN: Thank you, Mr. Speaker.

Members of the House, we are here to put on a very special events broadcast. We consider this a great honor and also we believe it is a fine idea for the California Medical Association to bring its story to the people of California, and this we consider a very dramatic special event which we want to bring to the people.

What we want to do at this time is to have you regard yourselves as though you were sitting in one of the main studios in NBC or CBS, while we put on a nationwide broadcast. Of course, this isn't "Double or Nothing," so we aren't going to expect any antics of any kind.

What we want you to do is maintain absolute quiet for about 30 seconds before we go on the air, and on the given applause cues, if you will come through and make it sound like the rooting section at the Coliseum during a USC-Notre Dame game, that would help stimulate audience interest, I am sure.

Just to review our cues, for 10 seconds preceding the opening words on the broadcast, we would like to come in with applause from the audience. So the applause cue will be this signal (indicating). Then, when we want you to fade down for the voices to come in, we will give you this signal (indicating), and then if you will hold any crowd noises during Dr. MacLean's speech to a minimum, it would be appreciated.

During the course of the speech should you feel like applauding, please feel free to do so. However, if you applaud for too long, it might tend to slow up our timing, so I will give you this fade signal again to cut off the applause so the timing won't be affected.

In one minute we will go on the air. (Applause.)

MR. NED BURMAN: Good evening, ladies and gentlemen. We greet you from the Biltmore Hotel in Los Angeles, where the physician members of California Medical Association are gathered for its 80th Annual Session.

The miraculous advances in modern medicine which have been recorded during the past 100 years of medical progress have been spurred by scientific meetings sponsored by organized medicine. Great strides have been made in the past year in the diagnosis and treatment of human ills. And distinguished physicians from all over the country are here to participate in the scientific sections. This special broadcast is coming to you from a meeting of the House of Delegates, which might be described as the nerve center of the medical profession in California. Doctors from every corner of this great state are here to conduct the business of their organization and to participate in the installation of incoming officers. Now, the Speaker of the House of Delegates, Dr. Lewis A. Alesen of Los Angeles, will introduce the new President of the California Medical Association. Dr. Alesen!

SPEAKER ALESEN: Members of the House of Delegates and ladies and gentlemen of the radio audience: It is now my honor and privilege to introduce to you the new President of the California Medical Association, Dr. H. Gordon MacLean of Oakland. Dr. MacLean! (Applause.)

DR. H. GORDON MACLEAN: Mr. Speaker, members of the House of Delegates of the California Medical Association, ladies and gentlemen: It is with a great feeling of honor that I accept the presidency of the California Medical Association.

The medical profession in California has had many grave problems to face, many great challenges to meet, in recent years. Leaders of the profession, to their everlasting credit, have faced those problems and met those challenges squarely and unequivocally. Their example has been inspiring, and the responsibility to follow that example I feel very deeply.

Most of the activities and projects of the California Medical Association are of a serious and earnest nature. Occasionally, however, a lighter note creeps in.

Many in this audience must have been amused recently to read of a new and sensational method of treating such serious diseases as appendicitis, polio, cancer and stomach ulcer by using colored goggles and manipulating tender spots on the soles of the patient's feet.

This revolutionary "technique"—I use the word in quotes—was described in detail before an Assembly Committee in Sacramento. Students were charged $200 for a two-day instruction course, where many closely guarded secrets, such as the chemical formula of salt and water, were divulged!

Through its own investigation department the California Medical Association learned of the fabulous mysteries of this technique and related them, along with other recent examples of quackery, to the Assembly Committee, with the result that action has been taken in Sacramento to strengthen the protection afforded California citizens against unscrupulous fakers who prey on the gullible, the ignorant, and the unthinking.

That, you might say, is an example of "preventive medicine" of a political nature. You've heard a lot in the last few years of doctors in the role of politicians. I know of few doctors who ever wanted to go into politics, but doctors have had to take an active interest in politics because as doctors they are vitally concerned with all measures that threaten a deterioration of medical care, whether those of ambitious government bureaus or those of individual promoters who capitalize on the sickness, misfortune and misery of others.

Because the practice of medicine, if it is to be performed faithfully and effectively, is essentially a personal service, the personal physician-patient relationship is a most important ingredient in medical care. The modern personal physician — in just the same way as the old-fashioned family doctor of the horse-and-buggy days—takes care of the whole man. The impersonal doctor could just as well be an employee of the government, and in those countries where doctors have become civil servants, impersonal and inferior medical care for all the people has resulted.

Organized medicine has had to think politically because even here in America there are those to whom the quality of medical care is far less important than the bureaucratic power to be gained through schemes of compulsory health insurance and the socialization of medicine.

And even though the voluntary health insurance system is growing at a phenomenal rate — even though 20 million additional people have enrolled in Blue Cross, Blue Shield and indemnity insurance plans in the past two years—and in spite of the fact that thousands of responsible public organizations have spoken out clearly against state medicine, the socializers haven't given up yet. The Federal Security Administration, whose chief, Mr. Oscar Ewing, likes to be known as "Mr. Socialized Medicine Himself," is still spending your tax dollars, ladies and gentlemen, to lobby for compulsory health insurance, and

is demanding once again that the Congress embrace that foreign system and adopt it as the law of the land.

The California Medical Association is proud of the hard, unceasing work doctors have done in the interests both of the public and the profession in the field of preventive legislation.

Necessary as that work has been, however, it is, by its very nature, largely a defensive undertaking. I think it is timely on this occasion to review briefly some of the positive accomplishments of organized medicine — the everyday, grass-roots, undramatic advances in personal physician-patient relations that have been achieved locally by doctors working cooperatively through their county medical societies.

For example, there is the matter of night and emergency call plans.

Because it's human nature to put off, many people, when they move to a new community or neighborhood, don't get around to looking up a doctor until the middle of some pain-wracked night.

Because that has happened so often, medical societies throughout the country have formulated emergency call systems to guarantee that anyone, resident or traveler, can obtain the services of a doctor at any hour, day or night or holiday, 365 days a year!

Every effort is made to publicize the existence of these emergency call plans. In Santa Clara County, for example, doctors ran a series of newspaper ads to inform the public of the service. And in most counties the medical societies advertise the service in the classified section of the telephone directories.

Another development of great importance to the public, and which more and more medical societies are adopting, was pioneered by Los Angeles doctors more than 25 years ago. That is the establishment of so-called arbitration or professional relations committees.

These committees function to consider complaints of patients. Such complaints are given thorough, confidential consideration, and if the physician is found at fault, he is so informed and suggestions are made to him regarding corrective steps.

Many complaints are based on misunderstanding. People are often surprised, for instance, when it is pointed out to them that the fee paid to a doctor isn't net compensation for his personal services, that he has a payroll and overhead to meet just as a business man. People are sometimes surprised to learn, too, that in the case of serious illness, the doctor's fee represents only about one-quarter of the patient's expense, the balance being accounted for by medicine, nurses, hospital care and other services.

One large California county society reports that only one or two bona fide serious complaints are received per month. Its arbitration committee, once the case has been decided, vigorously defends the injured party, regardless of whether it is the doctor or the patient! In a recent case in which the doctor ignored the committee's recommendations to reduce an excessive fee, the county medical society provided legal counsel for the patient, and the arbitration committee chairman testified against the doctor on the patient's behalf!

Three years ago the Alameda County Medical Association earned national attention with a series of newspaper advertisements calling public attention to the fact that in America medical care is available for all, regardless of ability to pay. Daily, the association pointed out, doctors of each community treat hundreds of persons at fees scaled down to meet the patient's circumstances. Daily members of the medical profession treat the needy in hospitals and clinics without charge. The Alameda Society guarantees medical care, without payment if necessary, to everyone in the county.

Some county societies maintain Bureaus of Medical Economics which serve to assist patients in financial problems relating to medical care. One society maintains a social service department headed by an expert medical social service consultant.

Again, California doctors pioneered in the development of physician-sponsored medical care plans. California Physicians' Service, sponsored by the California Medical Association, was the first statewide service type voluntary health insurance plan in the nation, and has served as a model for other physician - sponsored plans throughout America. Let's be realistic; C.P.S. is far from perfect. It doesn't yet function to the 100 per cent satisfaction either of subscriber or doctor. But the service is continually being studied and improved in the recognition of the many problems that constantly arise as, for example, the financial problems posed by the devaluation of both the patient's and the doctor's dollar. Patients, while interested in premium cost, are primarily concerned with adequate benefits and good medicine. And from the standpoint of both patient and doctor, adequate doctors' fees are important, for it costs money to render good medical practice.

The activities of county medical societies cover a multiplicity of fields, and vary according to community needs: An important activity, for example, of the San Diego County Medical Society was its participation in a mass chest x-ray survey in cooperation with the U. S. Public Health Department. In Fresno County members of the County Medical Society concerned with the health aspects of the migratory labor problem have formed a voluntary panel to give medical attention to children whose families are economically unable to engage a private physician and who are ineligible for county hospital care.

One particularly important activity—a California-pioneered idea and an example of how organized medicine works in the community interest—is the establishment of regional non-profit medically-sponsored community blood banks. Nine such community ventures geared to meet the complete requirements for blood transfusions in the regions they serve are functioning in San Francisco, in Oakland, in Eureka, in Sacramento, in San Diego, in San Mateo, in Santa Rosa, in Fresno and in Santa Barbara. Several of these banks were made possible by

loans of money by the California Medical Association toward their establishment.

The Irwin Memorial Blood Bank, sponsored by the San Francisco County Medical Society, was the first in this chain of humanitarian undertakings. Since its founding 10 years ago it not only has taken care of the blood transfusion needs of San Francisco and adjoining areas, but has supplied whole blood and plasma to the Armed Services during the war and is again, in conjunction with the Red Cross, serving as a procurement and distribution center for transfusion needs of the wounded in Korea.

That need, as we all know, is very great, and the doctors of California can well take pride in the farsightedness and the unselfish sacrifice of time and effort on the part of those in their ranks who have labored so hard to make possible the dramatic saving of the lives of our men in foreign battlefields. I hope that all of you listening now who are able to give blood will make an appointment at once with your nearest blood bank to go and give a pint.

Organized medicine, I think, can be forgiven if it points with pride to its successful efforts on behalf of the public and in the interest of a free profession in vigilantly combating quackery, whether on the part of unqualified practitioners in the field of diagnosis and treatment or on the part of unscrupulous schemers in the field of politics.

The medical profession in America can be proud, too, of the great strides that have been made in the betterment of the nation's health; of the dramatic increase during the past half century of 19 years in life expectancy; of the great reduction in both maternal and infant mortality rates; of the virtual elimination of such formerly dread diseases as typhoid fever and smallpox; of the spectacular advances in the prevention, control and treatment of many other ills.

Doctors and the public alike can be gratified over that record of continuing medical scientific progress. I believe there is a source of common gratification, too, to be found in the less dramatic but nonetheless very real progress being made every day in doctors' offices throughout California and the nation toward a better relationship, a better understanding between doctor and patient.

No one knows better than the medical profession how vitally important that understanding is.

The free practice of medicine has been under political attack. Doctors have risen vigorously to meet those attacks. We have fought hard—and successfully so far—but we recognize in all humility that the greatest factor in that success has been the wonderful understanding and support on the part of the public.

Early in the fight we learned that the great majority of the American people—not just doctors—still believe in the American way of life!

On behalf of the doctors of California I wish to thank with deep sincerity the people of California for their ready understanding and splendid support, and I pledge unceasing devotion by the California Medical Association to the goal of providing the people of California the finest medical care at a price they can afford to pay.

I thank you. (Applause.)

Mr. Ned Burman: Ladies and gentlemen, this has been a special broadcast from the 80th Annual Meeting of the California Medical Association. Those heard on the program were the Speaker of the House of Delegates, Dr. Lewis A. Alesen of Los Angeles, and the new President of the California Medical Association, Dr. H. Gordon MacLean of Oakland.

This is Ned Burman speaking for the California Medical Association convening in the Music Room of the Biltmore Hotel in Los Angeles. (Applause.)

Speaker Alesen: We are indebted to Dr. George H. Kress, for many years Secretary-Treasurer of the California Medical Association, one of its Past Presidents, and now its official Historian, for a list of the living Past Presidents of this Association. You know, in adopting the Constitution you made the Past Presidents ex-officio members of this House.

I am going to read the names of these men, many of whom I understand are present here today, and ask them to stand. Please withhold your applause until all have been named.

Presidential Year	*Name*	*City*
1916	George H. Kress	Los Angeles
1925	Edward N. Ewer	Oakland
1928	William H. Kiger	Los Angeles
1930	Lyell C. Kinney	San Diego
1931	Junius B. Harris	Sacramento
1933	George G. Reinle	Oakland
1935	Robert A. Peers	Colfax
1940	Harry H. Wilson	Los Angeles
1942	William R. Molony, Sr.	Los Angeles
1943	Karl L. Schaupp	San Francisco
1944	Lowell S. Goin	Los Angeles
1946	Sam J. McClendon	San Diego
1947	John W. Cline	San Francisco
1948	E. Vincent Askey	Los Angeles
1949	R. Stanley Kneeshaw	San Jose

(Applause.)

Speaker Alesen: We have heard one new President speak, ladies and gentlemen. It is now a distinct pleasure to present to you one of the men of the California Medical Association, a Past President of this Association, a man who spent a lot of good, hard work in our behalf, and a man to whom, of course, I cannot pay a higher tribute than to say he is one of our own—Dr. John W. Cline, Past President, and the new incoming President of the American Medical Association. Dr. Cline! (Standing applause.)

Dr. John W. Cline: Thank you very much. Mr. Speaker, gentlemen: It is a great pleasure for me to appear again in this House, of which I was a long-time member in one capacity or another. I have been asked to say something concerning the various problems which confront American medicine at this time. I realize that you have a tremendous amount

of work ahead of you and the time, therefore, is limited. I shall sketch briefly some and devote considerably more time to a few.

I am sure you all are interested in the problem of medical education. Our medical schools, or many of them, are in serious financial distress. We recognize the hazards involved in any variety of federal subsidy for continuing operation of medical schools. The attitude of the American Medical Association is that subsidies should not be made for ordinary operation, but one-time grants for remodeling and construction would not possess the hazard of federal control. Otherwise the funds should be raised from private sources.

Recognizing that fact, the American Medical Association at its meeting last December gave a half million dollars, not as a matter of supplying the entire need, because obviously it would not do so, but to stimulate others to do likewise and to gain by that means sufficient funds to relieve the situation.

You of the California Medical Association showed your perception and your remarkable generosity in contributing $100,000. That is the largest contribution aside from that of the American Medical Association, and on behalf of the American Medical Association I sincerely thank you for having made it.

At that time it was necessary for the American Medical Association to establish a foundation to receive the funds coming from various sources. The National Fund for Medical Education headed by Mr. Herbert Hoover had not yet been announced, and premature mention of it at that time would have created an embarrassing situation.

This week the foundation established by the American Medical Association and the National Fund for Medical Education will be merged, and there will no longer be a division. Shortly every doctor in the country will be solicited to contribute to medical education, and it is sincerely hoped that all will respond promptly and generously.

Another item that has caused some concern, even at this meeting, has been a program of hospital standardization. It is finally taking shape. I think many of you know the general outlines, and I wish to assure those who have some worries that the American Medical Association will not forget the fact that general practice is a tremendously important part of medicine. (Applause.) In the representation from the American Medical Association, general practice will be adequately recognized.

I would like to speak extensively concerning public relations, but that would take too long a period of time. Many of our California county societies, and certainly the California Medical Association, are more familiar with the problems of public relations and more active in that field than are most of the corresponding societies throughout the country.

I would like to speak for a moment concerning press relations. It has been my experience in various capacities over the years dealing with men of the press, the reporters, editors and publishers, to realize they are extremely fine individuals. They are honest; they are making a real effort to to present to their readers a word-picture which is accurate. When misunderstandings between us and the press have arisen, more of the fault has been on our side than theirs. If we cooperate adequately with the press we will permit them to fulfill their function much better, and it will result in better press for us.

Now, concerning the American Medical Association: Its policies, of course, are made just as yours are made, by the House of Delegates, and carried out by the officers. Throughout the country they are sometimes misunderstood. The officers and the members of the House of Delegates of the American Medical Association are desirous of having the constructive suggestions which any of you may make.

On the other hand, there has been and I suppose there always will be, just as there has been from time to time in this state, destructive criticism. While we welcome and will receive and consider constructive criticism, we must ignore that type which is purely carping. It has been my observation, in years in medical organizational work, that those who throw rocks toil not. If they wish to criticize they should put their shoulders to the wheel and try to do a job.

We have also been subjected to considerable criticism from outside the profession. This has resulted largely from misunderstanding and from lack of knowledge of what the American Medical Association is, and what it is trying to do. It, also, has been in part the result of a systematic campaign of abuse over the past 15 years.

On occasions this has sunk to the level of vilification, even to the level of libel, and has placed the American Medical Association in a very difficult situation. Its public relations were not good, and we reached a low ebb in 1948. In that year Mr. Truman ignored the party platform and campaigned on a personal platform, promising everything to everyone, including socialized medicine. It was generally assumed by him, by the socializers, and by many of the commentators and columnists, that his reelection was a mandate to enact socialized medicine.

Shortly following that election the House of Delegates of the American Medical Association met in St. Louis. It discussed this matter at considerable length. It issued a clear-cut, ringing statement of principles which was actually drawn up by the California delegation to that convention. The House directed a campaign be waged and levied a $25 assessment to implement the campaign.

The campaign was set up on the basis of the experience of the successful campaign in which many of you actively participated here in California in 1945. The three bases of that were: First, to convince the people of this country of the danger to their medical care which would result from any system of socialized medicine; second, to convince them of the fact that historically it had been the forerunner of socialism in general in most countries and, therefore, presented a hazard to all activities; and third, to develop and expand voluntary

health insurance, to provide methods of prepayment of the costs of medical care.

That was a very sound method of procedure.

In this state we had had more experience than had those elsewhere. Compulsory health insurance had been an issue here since 1918.

About 1920 it was voted down by the people of this state by a margin of two to one. Then came 1930 and the depression, and various studies were undertaken at that time to see what could be done to improve the distribution of the costs of medical care.

In 1938 the election of Mr. Olson precipitated the formation of C.P.S.

In 1939, when Mr. Olson made his proposals for socialized medicine, the legislators recognized the potential value of the program we were inaugurating, and in blueprint form C.P.S., even though it was not in operation, had tremendous moral value.

It grew slowly thereafter, and in 1945, we were confronted with a similar situation when Mr. Warren made his first proposal. He described C.P.S. as a miserable thing of about 100,000 members, and that was just about its size then.

Again the moral value of it was apparent. The demonstration of the intention of the medical profession of this state to try to solve the problems of the distribution of medical care carried tremendous weight.

Thereafter we inaugurated the campaign to expand voluntary health insurance in this state, not only C.P.S. but Blue Cross, and the insurance company plans.

In 1947 there was comparatively little difficulty in overcoming the proposal made for socialized medicine. There followed, as apparently there are developing at the present time, throughout the country, criticisms and questions about the advisability of the campaign.

I was your President, as Dr. Alesen said, in 1947-1948. I felt it incumbent upon me to ascertain from impartial sources whether the campaign we had waged had been as successful as we thought, or whether we had been deluding ourselves. I, therefore, asked Mr. Ben Read to give me the names of the Senators and Assemblymen and the legislative representatives in Sacramento who had been of most assistance in defeating the Warren proposal.

He gave me the names of eight legislators and nine legislative representatives. I wrote to all of them in questionnaire form. They all answered, except one of the legislative representatives.

Their answers took quite different forms. Some of them answered the questionnaire *ad seriatim*. Others wrote very brief paragraphs saying what they thought, and some of them took several pages to describe the effect that they felt our campaign and C.P.S. had had upon the outcome.

There was one striking thing: Every one of them was of the opinion that had we not had C.P.S., and had we not engaged in the intensive campaign for voluntary health insurance, socialized medicine would have been enacted.

In 1949 the full prestige and power of the Governor's office could drum up only a corporal's guard in one house of the Legislature to support his program. This year there is no serious proposal for socialized medicine. At the present time we have more than 65 per cent, or more than six and a half million people in this state covered by voluntary health insurance.

With those outlines, it was apparent that the American Medical Association should follow a similar pattern. Not only did we do that, but the same people directed the over-all strategy. Let us review the results of the campaign briefly.

Interest in health insurance has grown tremendously throughout the country. The knowledge of the people has grown tremendously. There has been a crystallization of public opinion. I think you can recognize by the character of current news stories the higher regard in which the American medical profession is now held due to the efforts it is making.

Over 90 per cent of the papers in this country are editorially opposed to socialized medicine. There are between ten and eleven thousand organizations of national, state and local scope on record with resolutions against it. The surveys have some importance. A labor survey recently showed that 45 per cent of labor were opposed to it. This is a continuing labor and management survey which is designed for the information of people who have an interest in such relationships, and I think it is a fairly accurate one. Forty-five per cent against, 28 per cent for, and 27 per cent had not made up their minds.

In Minnesota one of the newspapers keeps a continuing poll on various matters. In February 1949 it asked the question, "Is a national compulsory health insurance scheme needed?" The answers were "yes" 65 per cent, "no" 25 per cent. In February 1951, "yes" 37 per cent, "no" 53 per cent.

"Are you in favor of such a scheme?" February 1949, "yes" 56 per cent, "no" 23 per cent. In February 1951, "yes" 32 per cent, "no" 57 per cent.

You will observe in these figures that a considerable number of people have not made up their minds. This points up something I shall say later.

The growth of voluntary health insurance in this country has been tremendous. As a matter of fact, it has grown so rapidly that by the time the figures are compiled they are already out of date.

At the present time there are more than 20 million people covered by Blue Shield and other medically sponsored plans. There are more than 40 million people covered by Blue Cross plans; more than 72 million people have coverage of some type against the cost of illness.

A survey recently completed by the American Medical Association showed the following: That Blue Shield plans over the country paid 60 per cent of the cost of medical care for the people covered; that Blue Cross plans paid over 82 per cent of the cost for hospitalization of the people covered. This is real evidence of progress.

I would like to take just a moment to mention that

I recently was on a Joint Orientation Conference tour of the Department of Defense. I met a very interesting man, a man by the name of Roy Norr, on that trip. I heard he was a public relations man and I heard from people in New York he was one of the topnotch men in the country.

Subsequently I found out that this man represents Paramount Studios publicity, he represents Best Foods; he is the man who conducted the confectioners' campaign against the slogan, "Reach for a Lucky instead of a sweet." I think these establish him as a topnotch individual in his field.

At breakfast one morning he said he would like to speak to me and I agreed. He apparently did not want to say what he had to say in the presence of other people. As we left the dining room he said, "I want you to know that the campaign that you people have carried on and has been run for you by people whom I do not know, but whom I respect greatly, has been the most magnificent campaign of public relations which has been carried on in this country in the past 25 years."

From a man such as Mr. Norr, who never had anything to do with medicine and who did not know any of the people associated with the campaign, I think that is a compliment that we cannot overlook.

There have been criticisms of the campaign. There have been criticisms within our own ranks; criticisms that some of the methods used have not been quite the type of methods we would like to use. Of course they haven't. They are not the methods of the presentation of scientific papers. They are not in the language most of us are accustomed to use, but I found out recently how those pamphlets, the initial pamphlets, were constructed.

The Whitakers at that time resided at the Palmer House, and had a chambermaid who was a strong left-wing advocate of socialized medicine. They employed her to read over the pamphlets, after they were first drafted, to pick out the weak spots, to tell them what she didn't understand, and to show them how they could improve the pamphlets.

She took them home and passed them around among her friends, and came back with some very sound, solid criticisms. Whitaker and Baxter then felt that this was such a valuable contribution they did a similar thing with waiters, bellboys, elevator operators, with taxi drivers, and people of that type until they felt that they had a reasonably good cross-section of what approach would reach the minds of people in that particular educational bracket.

Then they went to insurance people, lawyers, bankers, and presented the same material to them, and these people found nothing objectionable in it.

So, when we begin to criticize some of the things that have been done, let us realize that this was very carefully done, very carefully worked out, and the results I have quoted to you, I think, prove the effectiveness of the campaign.

Just a word about elections. In elections in most states of large size, the influence of any segment of society can hardly be recognized. You all worked hard in certain elements of elections here. You didn't do it as county societies, or as a state association, or as the American Medical Association, but you worked as individuals and in informal groups.

There are some places in the country, however, where the influence of that type is easily recognizable. Senator Pepper, over the air, on *Reporters' Round-up* or *Meet the Press*, attributed his defeat in the primary to the activities of the medical profession and their wives. The same can be said to be true of Graham in North Carolina. It certainly was true of Taylor in Idaho.

In November Mr. Thomas, who was the author of the last omnibus bill for socialized medicine, was beaten in Utah, a small state where again the effect of a single issue can be recognized.

In Milwaukee Andrew Biemiller, who was the most vicious and vitriolic critic of medicine in Congress, was defeated, and Mr. Biemiller has stated that that was the cause of his defeat.

Mr. Sullivan in Omaha had the same experience.

After the election, when the Republicans broadcast a meeting to honor their new members of Congress, several members addressed that meeting. I happened to hear it by accident as I was going home from my office. I pushed the top button in my car radio, and I heard the announcer say, "Senator Taft will make the principal speech."

Senator Taft said, in the course of his remarks, that almost everywhere in the country where socialized medicine had been an issue, that the proponent of it had gone down to defeat. He said the reason that had occurred was that Americans were not willing to entrust their medical care to centralized government. He did not say "this administration." I believe he meant any administration at any time, and I think therein probably lies the conclusion one could draw.

This all adds up to tremendous progress, but let us not delude ourselves. The battle is not won. There is no room for complacency at this time. We can't afford to relax. We have a tremendous responsibility as citizens.

Some people may think that this is a self-serving remark on the part of the medical profession when I voice it, but I feel we have a tremendous responsibility as citizens and as doctors to the preservation of good medical care in this country.

I feel there is no question, based upon history and based upon the federal government administration of medical care programs in this country, that were we to have any variety of federal compulsory health insurance it would inevitably lead to deterioration of medical care. We have an obligation to ourselves to remain a free profession because only if we remain a free profession can we fulfill our obligation. Because most of us are getting along beyond the apex of our active lives, we ought to consider that we have that same obligation to protect the future freedom of our successors.

To do this we have to meet certain problems. We have recognized for a long time that the physician has a dual responsibility to his patient. He must render to him the best medical care he is able, and

he must treat him fairly in all respects. If one extends that thinking to the medical profession and the public, do we then not have an obligation to see that medical care is brought progressively within easier reach of those who require it? Some might object that we do not have that moral obligation. Perhaps we don't have a greater moral obligation to do so than do people in other spheres of activity who provide essential service to do the same in their own fields. Certainly the traditions of service of our profession, and certainly our own enlightened self-interest dictate that we do so.

At the same time we must adhere to proven methods, and we must expand and improve voluntary health insurance. When I say "improve voluntary health insurance" I am not exactly certain what the nature of improvement should be. There are students of the problem who feel that we have perhaps paid too much attention to comparatively minor illness, and too little attention to graver illness. That may be the case, but all over the country experiments of various types are going on, and shortly there will begin in Santa Clara County an experiment which ought to provide part of the answer to that question.

Let us not resist change or accept change simply because it is change. Let us weigh every proposal for change and let us measure it by two criteria. Does it contribute to the medical welfare of the people, and does it respect the rights and legitimate interests of the profession?

Then let us make changes for reasons. Let us make them gradually. Precipitate change might easily result in much greater harm than a situation which we think is not an ideal one at the present time.

At the present time we face on the national level substantially the same situation that we faced here in 1947. Within the past three months I have been east a number of times. In the course of these trips I have encountered some interesting people, Senator Taft, Senator McClellan, James Byrnes, who has held nearly every office in this country except that of President; Mr. Harold Stassen, whom I met by accident in the airport in Chicago and with whom I spent half an hour; Dave Beck, the executive vice-president of the Teamsters Union; Becker of the UAW, CIO; and Mrs. Anna Rosenberg. I have discussed these things with them.

Again, there is one salient, outstanding point of agreement. These people represent very divergent political points of view. They are quite different people, but in their minds there is one salient conviction, we must have in this country realistic and very extensive voluntary health insurance, or ultimately our efforts will have gone for naught because the government will enact some sort of a scheme.

Too often we tend to have tubular vision. We tend to focus on some small item which may appear to us at the moment to be tremendously important. We lack the full field of vision which allows us to see the entire problem, and the more emotional we become, the narrower becomes the tubular vision.

This is a dignified, deliberative body. Debate is usually on an extremely high level. It should be devoid of emotion. It should have general welfare as its basis.

I think we must consider here the consequences of what we do. California has been a leader in American medicine, and a leader in the American Medical Association, as is demonstrated by the acceptance by the Association without change of a semicolon of the Declaration of Principles drafted in December 1948.

What is done in this state has tremendous impact over the entire country; far more so than one would expect. We are the second largest state now and we have been pioneers in opposing socialized medicine and in voluntary health insurance.

We will be judged, let us remember, by what we do. We can't talk without performing. Let us consider very carefully what is done in our meetings, and what we decide. Let us deal with things on a factual, sound, broad-gauge basis. The failure of any major plan in this country, or sufficiently radical alteration in the plan to indicate that it was a failure, would be the greatest catastrophe which could occur to American medicine.

Let us realize our responsibilities to the people of California, to California medicine, to the people of the United States, and to American medicine. Let us calmly adjust our differences of opinion and thoughtfully work out such changes as we may think are indicated.

I have great confidence in the medical profession of this country, and particularly the medical profession of my own state in its capacity and its desire to do that. Thank you very much. (Applause.)

. . . Vice-Speaker Charnock now resumes the chair. . . .

VICE-SPEAKER CHARNOCK: Thank you, Dr. Cline.

The next order of business is the Secretary's announcement of the Council's selection of place for the 1952 Annual Session. Mr. Secretary!

SECRETARY DANIELS: Mr. Speaker, the Council has selected Los Angeles for the 1952 meeting. (Applause.)

VICE-SPEAKER CHARNOCK: Thank you, Mr. Secretary.

The next order of business is the election of officers. Nominations are now in order for the office of the President-Elect. The chair recognizes Dr. Jay J. Crane.

DR. JAY J. CRANE (Los Angeles County): Mr. Speaker, officers, members of the House of Delegates: I wish to nominate Lewis A. Alesen for President-Elect. He needs no introduction. There is no man, no doctor in California, more worthy and more capable of holding that high office. (Applause.)

VICE-SPEAKER CHARNOCK: Dr. Mulfinger of Los Angeles County.

DR. CARL L. MULFINGER (Los Angeles County):

Mr. Vice-Speaker and members of the House of Delegates: It is very rare for a man to have the opportunity to nominate his ex-roommate from his college days to such a high office as President-Elect of the California Medical Association.

Dr. Alesen has performed in this community not only as an outstanding surgeon, but as a fine citizen. He has done so many things here that are worthy of mention but can't be mentioned. I nominate him, not only on the basis of his professional accomplishments but on the basis of his accomplishments as a citizen. (Applause.)

VICE-SPEAKER CHARNOCK: The name of Dr. Lewis A. Alesen has been placed in nomination. Are there any further nominations for the office of President-Elect? The chair, hearing no other nominations, declares the nominations closed. They are closed.

How will you vote?

. . . There were calls of acclamation. . . .

VICE-SPEAKER CHARNOCK: All those who are in favor of Dr. Lewis A. Alesen for President-Elect will signify by saying, "Aye."

. . . The motion was put to a vote and it was unanimously carried. . . .

VICE-SPEAKER CHARNOCK: The chair is deeply honored to declare Dr. Lewis A. Alesen elected President-Elect. (Applause.)

PRESIDENT-ELECT ALESEN: Members of the House of Delegates: If I were Demosthenes, and if my poor feeble tongue didn't twist around words, I would like to make an appropriate speech.

My voice is thick. I would rather cry. Let's get along with the work. (Applause.)

. . . Speaker Alesen now resumes the chair. . . .

SPEAKER ALESEN: The next office is that of the office of the Speaker. The chair will entertain nominations for that.

DR. RICHARD O. BULLIS (Los Angeles County): Mr. Speaker and members of the House of Delegates: I would like to place in nomination the name of Donald Charnock for Speaker of the House of Delegates. (Applause.)

SPEAKER ALESEN: The name of Dr. Donald Charnock has been placed in nomination as Speaker of the House of Delegates. Are there other nominations? The chair, hearing no further nominations, declares them to be closed. How will you vote?

. . . There were calls of acclamation. . . .

SPEAKER ALESEN: All in favor of electing Dr. Donald Charnock as Speaker of the House signify by saying, "Aye."

. . . The motion was put to a vote and it was unanimously carried. . . .

SPEAKER ALESEN: Mr. Secretary, will you cast the ballot?

The next office is the office of Vice-Speaker. Nominations are in order for that office.

DR. ARTHUR A. KIRCHNER (Los Angeles County): Mr. Speaker, members of the House of Delegates: I would like to place in nomination the name of a man who has had considerable experience in political medicine, for Vice-Speaker of the House. His experience extends from a local level to a national level. At the local level he has been a Councilor for two terms. He has been chairman of our local Los Angeles fee complaints committee, chairman of the Los Angeles County administrations committee, chairman of the Los Angeles County civil service medical appeals committee.

At the state level he has been a state councilor for two years, 1947 through 1949. At the national level he has been an Alternate Delegate to the American Medical Association for two years.

More than that, he has served as a Delegate to the American Medical Association for one term.

I feel, and I am sure you do, that he has earned his spurs, and it gives me great pleasure to place in nomination for Vice-Speaker of the House of Delegates the name of Eugene F. Hoffman, Los Angeles. (Applause.)

SPEAKER ALESEN: The name of Dr. Eugene F. Hoffman has been placed in nomination for the position of Vice-Speaker. Are there other nominations?

DR. VERNE GHORMLEY (Fresno County): Mr. Speaker, members of the House of Delegates: I do not have the ability, nor do I have the intention, of claiming the role of a plaintive voice of the minority views from the land of the cotton bowl and the oil well. I realize in the larger metropolitan areas we have a greater preponderance of abilities maturing over a longer period of time that are quite capable of holding these larger jobs. I do not detract from their other honor; at the same time I do not wish to detract from any you might give to individuals from smaller localities.

We can remember that such men as Abraham Lincoln, Mark Twain, and even the backbone of medical practice, the country doctor, come from the small, rural districts. For this reason I would like to submit for consideration the name of an individual who, while he has not been known as well, possibly, in medical circles in this part of the country as elsewhere, is a man, however, well known in his own sphere of influence locally in the area of the central part of the state as well as statewide in some considerations. He is an outstanding physician, he is a good parliamentarian. He thinks in a straight line. He owes no one any allegiance, and owes nobody any promises. For this reason, gentlemen, I would like to submit the name of Dr. Henry A. Randel of Fresno. (Applause.)

SPEAKER ALESEN: The name of Dr. Henry A. Randel of Fresno has been placed in nomination for the office of Vice-Speaker of the House of Delegates. Are there further nominations?

DR. SOPHIE L. GOLDMAN (Kern County): While it is not necessary to second nominations, it is a pleasure and an honor for me to second the nomination of Dr. Henry Randel of Fresno for Vice-Speaker. (Applause.)

SPEAKER ALESEN: Are there additional nominations?

DR. J. E. YOUNG (Fresno County): Mr. Chairman, I too, would like to second the nomination of Dr. Randel. He comes here with only one purpose in mind, and that is to serve the profession of which he has been a good member in our locality. We recommend him to you because he has been a source of strength and advice to us locally, and in the San Joaquin Valley. We feel he is particularly well located geographically for this position because of the fact he is in the San Joaquin Valley. The San Joaquin Valley is becoming more and more important in the affairs of this state, both politically and economically. We are certain he has the problems of the profession at heart, and I am certain he will serve you well. That is his motive for running for this office. (Applause.)

SPEAKER ALESEN: Are there further nominations?

DR. JAMES E. FELDMAYER (Tulare County): Mr. Speaker, Delegates: I, too, would like to second the nomination of Dr. Henry Randel of Fresno for the office of Vice-Speaker. We all know at the present time there is a great burden on organized medicine, and I feel Dr. Randel would continue the good work that our officers have done in the past. (Applause.)

SPEAKER ALESEN: Are there any further nominations? If not, the chair will declare the nominations closed. We will pass out the ballots, please, Mr. Hunton. We will have a committee of tellers. Dr. Carson of San Francisco, Dr. Donaldson of Orange, and Dr. Franklin Mead of Riverside, will you please act as tellers?

There are two nominees. Will you place their names on the board, please, Mr. Hunton?

We are voting on the office of Vice-Speaker of the House of Delegates.

While we are proceeding with the balloting, I think we can go ahead with the announcement and election of the District Councilors. As you know, we are now working under the new Constitution, and the District Councilors were elected yesterday, 24 hours prior to the second meeting of the House of Delegates, which is in session at this time.

Will the chairman in each instance arise in numerical sequence and announce the name of the selected Councilor?

District No. 1, please.

A MEMBER: Dr. Francis E. West.

SPEAKER ALESEN: Dr. Francis E. West has been elected Councilor from District No. 1. Is there a challenge? Hearing none, the chair declares the election completed.

District No. 2.

A MEMBER: Dr. John D. Ball.

SPEAKER ALESEN: Dr. John D. Ball has been elected Councilor from District No. 2. Is there any challenge? Hearing none, the chair declares the election completed.

District No. 3.

A MEMBER: District No. 3, Los Angeles County, is Dr. H. Clifford Loos.

SPEAKER ALESEN: District No. 3 announces the selection of Dr. H. Clifford Loos. Is there any challenge? Hearing none, the chair declares the election is completed. Please proceed, Dr. Foster.

DR. FOSTER: District No. 4 is Dr. J. Philip Sampson.

SPEAKER ALESEN: Is there any challenge? If not, the chair declares the election completed. District No. 5.

A MEMBER: Dr. A. A. Morrison of Ventura.

SPEAKER ALESEN: Dr. A. A. Morrison is selected as Councilor from District No. 5. Is there any challenge? Hearing none, the chair declares the election completed. District No. 6.

A MEMBER: Dr. Neil J. Dau of Fresno has been selected as Councilor.

SPEAKER ALESEN: Dr. Neil Dau of Fresno has been selected as Councilor from District No. 6. Is there any challenge? Hearing none, the chair declares the election completed. District No. 7.

A MEMBER: Dr. Hartzell Ray.

SPEAKER ALESEN: Dr. Hartzell Ray has been declared as elected Councilor. Is there any challenge? Hearing none, the chair declares the election completed. District No. 8.

A MEMBER: Laurence Montgomery.

SPEAKER ALESEN: Laurence Montgomery has been elected from District No. 8. Is there any challenge? Hearing none, the chair declares the election completed. District No. 9.

A MEMBER: Dr. Donald D. Lum.

SPEAKER ALESEN: Dr. Donald D. Lum is selected from District No. 9. Is there any challenge? Hearing none, the chair declares the election completed. District No. 10.

A MEMBER: Dr. John W. Green.

SPEAKER ALESEN: Dr. John W. Green has been selected by District No. 10. Is there any challenge? Hearing none, the chair declares the election completed. District No. 11.

A MEMBER: Dr. Wayne Pollock.

SPEAKER ALESEN: Dr. Wayne Pollock is the selection of District No. 11. Is there any challenge? Hearing none, the chair declares the election completed.

That concludes the election of the District Councilors.

There are two Councilors-at-Large whose terms expire. Dr. Francis E. West, San Diego. Nominations are now in order.

DR. FREDERICK A. VEITCH (Riverside County): It is with pleasure that I place before this body the name of Arthur Varden of San Bernardino County to become a Delegate-at-Large from this part of the state.

SPEAKER ALESEN: The name of Dr. Arthur Varden has been placed in nomination for Councilor-at-Large to succeed Dr. Francis E. West. Are there additional nominations? Hearing none, the chair declares the nominations closed.

All those in favor of electing Dr. Arthur Varden as Councilor-at-Large, succeeding Dr. Francis E. West, signify by saying, "Aye."

. . . The motion was put to a vote and it was unanimously carried. . . .

SPEAKER ALESEN: It is so ordered. Mr. Secretary, will you so cast?

Now, the term of Ivan C. Heron of San Francisco, term expiring.

DR. FRANCIS T. HODGES (San Francisco County): Mr. Chairman, it is my honor to nominate for the office of Councilor-at-Large a man known to all of you who has been tried in local and C.M.A. doings for some period of time, and who should remain in office; that is Ivan C. Heron of San Francisco.

SPEAKER ALESEN: The name of Dr. Ivan C. Heron has been placed in nomination to succeed himself as Councilor-at-Large. Are there other nominations? Hearing none, the chair declares the nominations closed.

All those in favor of selecting Dr. Ivan C. Heron to succeed himself in this post will signify by saying, "Aye."

. . . The motion was put to a vote and it was unanimously carried. . . .

SPEAKER ALESEN: It is so ordered. Mr. Secretary, will you please cast the ballot?

DR. A. A. MORRISON (Ventura County): Mr. Speaker, members of the House of Delegates: Those of you who have been coming to these meetings for a long time will bear me out in this. I think we have heard many flowery words when a horse is being run. When the horse has finished a successful race, we hear nothing.

I would like to make this a motion. Our Councilor, my immediate predecessor, has served this House of Delegates for 10 years. We feel he has done a very good job locally and also in the interests of medicine in the State of California.

I would like to move, Mr. Speaker, that this House give Dr. Harry Henderson a vote of thanks for 10 years of faithful and conscientious service. (Applause.)

SPEAKER ALESEN: By your applause you have unanimously passed this resolution eulogizing Dr. Henderson.

The next item of business is that of the selection of the Delegate to the American Medical Association.

DR. E. VINCENT ASKEY (Los Angeles County): Mr. Speaker and ladies and gentlemen: In the last couple of days I have been besieged by a lot of people as the chairman of your delegation to the American Medical Association, asking me for a frank expression of my opinion as to how our delegates conduct themselves, their efficiency, and whether they are good delegates. I think it is only fair that I give my opinion to you as the House and not to individual members.

I tried to tell you some of the facts at the meeting yesterday, but apparently I didn't get it over, or some of you were not here, as to how I felt in regard to it. May I say that I have never been associated in my lifetime with a group of men who took their responsibility so keenly as every member of our delegation. I think that they go there with the idea of developing the best for the medical profession of America that they can. They go there with the idea of bringing to our national body the expression of opinion of you men, and the men that you represent.

They have always, in my opinion, carried out your directions to the best of their ability, and intend to do so.

Now, there are five men here, and I think it is only right that I give you an estimate of each of them.

Dr. Robertson Ward of San Francisco, term expiring. He has been a tower of strength. He is now chairman of the American Medical Association Committee for Chronic Diseases.

A MEMBER: Mr. Chairman, a point of order. Is the speaker making a nomination or delivering a eulogy?

SPEAKER ALESEN: All right, Dr. Askey, proceed.

DR. E. VINCENT ASKEY (Los Angeles County): I did not hear you, Mr. Speaker.

SPEAKER ALESEN: Proceed. I believe your remarks are in order, Dr. Askey. (Laughter.)

DR. E. VINCENT ASKEY (Los Angeles County): Thank you very much, gentlemen. If you want me to sit down I will be happy to do it. (Applause.)

I am trying to tell you my opinion of these men. I am not going to play favorites; don't worry.

Robertson Ward always has been on the Blood Bank Commission. He has, in these conditions in which there is so much controversy, been a tower of strength in the House of Delegates of the American Medical Association. He is revered by every member that I know of in the American Medical Association House of Delegates. In my opinion he is a very able man and has ably represented you.

Sam J. McClendon, a Past President of your association, a man who was the chairman of the delegation just ahead of Dwight Murray, a man who carried the ball when you know the California Medical Association did not stand in its enviable position which it has now attained. Sam McClendon has given yeoman service.

Eugene Hoffman had the unfortunate happenstance to follow that man who is awfully hard to replace, and I refer to a Past President, Dr. Lowell Goin. Having followed Dr. Lowell Goin as your Speaker, I know what a job that was. Eugene Hoffman followed that man and he has made a place in the American Medical Association. I was talking to a man now who said, "I have never seen that man when he did not work to the fullest extent. When you turn over anything to him you forget it. You know it will be done." That is my opinion of Dr. Hoffman.

Dr. John W. Green, who has just been reelected as Councilor of this Association, for years has been

a tower of strength. Pete Green fortunately has the ability to get around and meet people and get them on their home grounds, and they trust him. Pete Green has never talked to a man but what he has practiced in that man's town for six years out of his life. I counted it up one time and Pete Green had practiced 67 years in the United States in different places. (Laughter.)

As to Lewis A. Alesen, I don't need to say anything more. You know him. He is an able speaker. You trust him. He is a fine addition to our delegation.

The point I am making, gentlemen, is this: Each one of these incumbents, in my opinion, is of a high type; they are men who could be trusted in anything that you would give them. I want it distinctly understood, however, I am not making a pitch for any one of these as against any of them. May I let you know that we, your delegates, will work with anybody that you elect. We do have the confidence in these men and I want that understood. (Applause.)

SPEAKER ALESEN: Yes, Dr. McGuinness.

DR. JOSEPH S. MCGUINNESS (San Francisco County): Mr. Speaker and Delegates: It is a pleasure for me to nominate to this position as Delegate to the American Medical Association a man whom I have come to know well in the last two years. I think you all have known him a bit longer. I believe that Dr. Chief Bender has great possibilities for this job. You know what he has done here. We know that he has done a terrific job in San Francisco.

As far as his connections with the American Medical Association, we were hosts, and he was our main host of the American Medical Association last year, and I believe the members of that organization honor him and respect him, not only as an outstanding physician but an outstanding person who works for the betterment of medical care. Thank you. (Applause.)

SPEAKER ALESEN: Dr. Magoon.

DR. LESLIE B. MAGOON (Santa Clara County): There is nothing I can say that will add to the stature of Chief Bender in your minds. I limit myself to seconding his nomination as a delegate to the American Medical Association.

SPEAKER ALESEN: Dr. Teall of Sacramento is recognized.

DR. RALPH TEALL (Sacramento County): Again not wishing to impose on your time or good nature, throughout the state many of us have come to know the Chief, and have admired the things he stands for. I, too, would like to take this opportunity to second his nomination for this position. (Applause.)

SPEAKER ALESEN: Dr. Alson Kilgore of San Francisco is recognized.

DR. ALSON KILGORE (San Francisco County): Mr. Speaker, members of the House of Delegates: I am sure I am right that the nomination of Chief Bender carries no implication whatever of criticism of the service that Dr. Robertson Ward has made in the interests of California in the American Medical Association, but it rather grows out of a feeling that there should be a more frequent rotation of service among the servants of this Association. I will agree with that in principle. I don't think this Association has any right to expect the amount of service over the length of time that some of our members have given, and it is better for the affairs of this Association and its various offices to be spread around among the members.

But some of us feel that the representation of the California Medical Association to the American Medical Association stands in a little different light, that the service and effectiveness of a man in the American Medical Association is materially enhanced by his experience, and by his acquaintances which have been built up in that body during the time he has served there.

It seems to me perhaps this is an issue which might well be left to the House of Delegates to settle, and I therefore take pleasure in placing in nomination the name of Dr. Robertson Ward to succeed himself. (Applause.)

SPEAKER ALESEN: The name of Dr. Robertson Ward has been placed in nomination to succeed himself. Are there other nominations?

DR. H. CLIFFORD LOOS (Los Angeles County): Mr. Speaker, a point of order. Are we voting for one office at the present time, or do we toss in all of our nominations for any of the vacancies?

SPEAKER ALESEN: We will have to take one at a time, the particular vacancy involved.

DR. H. CLIFFORD LOOS (Los Angeles County): Would you name the vacancy at the time it comes up that is involved?

SPEAKER ALESEN: There are five.

DR. H. CLIFFORD LOOS (Los Angeles County): And will you name them as they come up?

SPEAKER ALESEN: Yes, sir.

This is for the vacancy of Dr. Robertson Ward, term expiring.

Are there any further nominations?

DR. SIDNEY J. SHIPMAN (San Francisco County): I have known both of these men for a long time, and I respect them both very highly. Dr. Bender, since I have been chairman of the Council, has been unstinting in his value to the California Medical Association. Nevertheless, in this instance I am concerned about two things: One, that neither Dr. Ward nor anyone else should feel that his service has been of an inferior quality; that he has had only one full term; that he deserves another. And to be sure this was true I asked members of the delegation and was told his service was of an outstanding character. It, therefore, gives me great pleasure to second the nomination of Dr. Robertson Ward. (Applause.)

SPEAKER ALESEN: Are there additional nominations? Hearing none, the chair declares the nominations closed. The vote will be by ballot.

We will have another board of tellers: Dr. Paul Foster of Los Angeles, Harold Behneman of Riverside, and Leopold Fraser of Alameda-Contra Costa. will act as tellers. Will you please proceed. This is ballot number three.

The candidates are Dr. William Bender of San Franeiseo and Dr. Robertson Ward of San Franeisco for the term of Dr. Robertson Ward as Delegate to the American Medieal Assoeiation.

The next post is that of Sam J. McClendon, term now expiring, as Delegate to the Ameriean Medieal Assoeiation. Nominations are in order.

Dr. John D. Ball: Mr. Speaker, members of the House of Delegates: I am going to deliver a eulogy and also propose a nomination. I nominate Sam McClendon to sueeeed himself. (Applause.)

Speaker Alesen: Dr. Sam J. MeClendon has been nominated to suceeed himself. Are there other nominations? Hearing none, the ehair deelares the nominations elosed.

All those in favor of seleeting Dr. Sam J. McClendon to sueeeed himself please signify by saying, "Aye."

. . . The motion was put to a vote and it was unanimously earried. . . .

Speaker Alesen: Dr. McClendon is deelared elected. Mr. Secretary, will you please east the ballot?

The next term is that of Eugene F. Hoffman.

Dr. Loos is reeognized.

Dr. H. Clifford Loos (Los Angeles County): I, of course, wish to nominate Dr. Eugene Hoffman to succeed himself. I had prepared a very fine speeeh, but Art Kirehner and Vinee Askey took all of the fire away and there is nothing more to say exeept that Gene Hoffman should be sent baek. We need him. (Applause.)

Speaker Alesen: The name of Dr. Eugene F. Hoffman has been plaeed in nomination to sueeeed himself as delegate to the Ameriean Medieal Association. Are there other nominations? Hearing none, the ehair deelares the nominations closed.

All those in favor of the seleetion of Dr. Eugene F. Hoffman to sueeeed himself as delegate to the Ameriean Medical Association please signify by saying, "Aye."

. . . The motion was put to a vote and it was unanimously earried. . . .

Speaker Alesen: It is so ordered. Mr. Seeretary, will you so east.

The next post is that of John W. Green, whose term expires. The chair reeognizes Dr. George Dawson of Napa.

Dr. George Dawson (Napa County): Mr. Speaker, members of the House: I wish to eorreet Dr. Askey. He informed us a few minutes ago that Dr. Green had praetieed medieine for 67 years. It has only been 43 years, but I maintain that 43 years is long enough for a man in his part of the state to be reeognized as Mr. Medieine Himself, Mr. Anti-Socialism Itself, and I take pleasure in nominating Dr. John W. Green. (Applause.)

Speaker Alesen: The name of Dr. John W. Green has been placed in nomination to suceeed himself in the post of delegate to the American Medieal Assoeiation. Are there any further nominations for this post? Hearing none, the ehair deelares the nominations elosed.

All those in favor of eleeting Dr. John W. Green to sueceed himself please signify by saying, "Aye."

. . . The motion was put to a vote and it was unanimously earried. . . .

Speaker Alesen: It is so ordered. Mr. Seeretary, will you so east?

. . . Viee-Speaker Charnoek now assumes the chair. . . .

Vice-Speaker Charnock: The next is the name of Dr. Lewis Alesen, term expiring.

Dr. Wilbur Bailey: Mr. Speaker: There are times when there is no need to make a speech: the reeord speaks for itself. It gives me great pleasure to nominate Dr. Lewis Alesen to sueeeed himself. (Applause.)

Vice-Speaker Charnock: Dr. Alesen has been nominated. Are there other nominations for this offiee? Hearing none, the ehair deelares the nominations elosed.

All those in favor of eleeting Dr. Alesen to sueeeed himself will please signify by saying, "Aye."

. . . The motion was put to a vote and earried. . . .

Vice-Speaker Charnock: Mr. Seeretary, will you so east?

At this time, ladies and gentlemen, we had promised C.P.S. that they eould take over.

Just a moment. We will ask Seeretary Daniels to announce the ballots on the post of Viee-Speaker.

Secretary Daniels: The vote for the Viee-Speaker is as follows: Henry Randel, Fresno, 137 votes; Dr. Hoffman, Los Angeles, 103. (Applause.)

Vice-Speaker Charnock: Dr. Randel of Fresno County is deelared elected to the post of Viee-Speaker.

At this time we will turn the gavel over to Dr. Doughty, President of the California Physieians' Serviee, who will conduet their meeting. At the end of that meeting we shall reconvene as the House of Delegates of the California Medieal Assoeiation.

. . . Following announeements the Tuesday Afternoon Session of the California Medieal Association adjourned at 3:00 p.m. to reeonvene after the meeting of the California Physieians' Service. . . .

TUESDAY EVENING SESSION
MAY 15, 1951

The Tuesday Evening Session was held in the Musie Room of the Biltmore Hotel. and was ealled to order at 8:00 p.m. by Viee-Speaker Donald Charnock, who presided.

Vice-Speaker Charnock: The first order of business will be the report on Ballot No. 3. Mr. Secretary.

SECRETARY DANIELS: Mr. Vice-Speaker, the vote on Ballot No. 3 for delegate to the American Medical Association, Bender 80 votes, Ward 156. (Applause.)

VICE-SPEAKER CHARNOCK: Dr. Ward is declared elected.

DR. WILBUR BAILEY: Mr. Speaker, I would like to see what we got for the money. I don't mean it that way, but we just elected trustees of the C.M.A. and of the C.P.S., and I think it would be in order for you to introduce the newly-elected gentlemen to the House.

VICE-SPEAKER CHARNOCK: We have 11 Councilors that have just been elected. As I call them off, will you all stand.

Councilor, District No. 1, Dr. West. (Applause.)

Councilor, District No. 2, Dr. Ball. (Applause.)

Councilor, District No. 3, Dr. Loos. (Applause.)

Councilor, District No. 4, Dr. Sampson. (Applause.)

Councilor, District No. 5, Dr. Morrison. (Applause.)

Councilor, District No. 6, Dr. Dau. (Applause.)

Councilor, District No. 7, Dr. Ray. (Applause.)

Councilor, District No. 8, Dr. Montgomery. (Applause.)

Councilor, District No. 9, Dr. Lum. (Applause.)

Councilor, District No. 10, Dr. Green. (Applause.)

Councilor, District No. 11, Dr. Pollock. (Applause.)

Gentlemen, those are your Councilors.

The next order of business will be the election of alternates to the American Medical Association. Incumbents, Anthony B. Diepenbrock, alternate for Robertson Ward.

I will now entertain nominations.

DR. ROBERTO ESCAMILLA (San Francisco County): Mr. Chairman, I would like to place in nomination the name of Dr. Henry Gibbons of San Francisco. Dr. Gibbons is one of our teachers at the Stanford Medical School; one who has shown more than the usual political awareness and political adroitness, and I am pleased to place his name in nomination on behalf of the San Francisco delegation.

VICE-SPEAKER CHARNOCK: Do I hear any other nominations? The chair hearing none declares the nominations closed.

All those in favor of Dr. Henry Gibbons will signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

VICE-SPEAKER CHARNOCK: Next is Dr. Walter Cherry, alternate for Dr. Sam J. McClendon.

DR. J. B. PRICE (Orange County): Dr. Walter Cherry, who has been both Councilor and alternate delegate, has asked that he not be carried on as the alternate delegate to the American Medical Association. It is my pleasure to place in nomination in his place Dr. A. E. Moore of San Diego.

VICE-SPEAKER CHARNOCK: Dr. A. E. Moore of San Diego. Are there any other nominations? The chair hearing none declare the nominations closed.

All those in favor of Dr. Moore as alternate to Dr. McClendon will signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

VICE-SPEAKER CHARNOCK: Dr. Moore is elected.

Alternate to Eugene F. Hoffman, incumbent, Frederic S. Ewens.

DR. J. LAFE LUDWIG (Los Angeles County): Mr. Speaker and members of the House of Delegates: I am very happy to offer in nomination to succeed himself a confrere of mine as alternate to the American Medical Association, a member of the Los Angeles County Medical Association, a man who is doing a fine job for medicine, Dr. Frederic Ewens. (Applause.)

VICE-SPEAKER CHARNOCK: Dr. Frederic Ewens has been placed in nomination. Are there any other nominations? The chair hearing none declares the nominations closed. They are closed.

All those in favor of Dr. Ewens will signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

VICE-SPEAKER CHARNOCK: Alternate to John W. Green, Frank A. MacDonald, incumbent.

DR. ORRIN COOK (Sacramento County): We believe that the careful selection of our American Medical Association delegates is important, and we believe the selection of alternates is important. We are still suffering because insufficient attention was paid to the selection of the Vice-President of the United States. (Laughter and applause.)

We have a man in mind who has served as Councilor for several years, and as Trustee of C.P.S., who knows our problems intimately and has also served in this capacity for several years and knows his way around the American Medical Association.

I would like to place in nomination the name of Dr. Frank MacDonald to succeed himself. (Applause.)

VICE-SPEAKER CHARNOCK: Dr. Frank MacDonald has been nominated to succeed himself. Do I hear further nominations? Hearing none, the chair declares the nominations closed.

Those who are in favor of Dr. Frank MacDonald will signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

VICE-SPEAKER CHARNOCK: Dr. MacDonald is elected.

Alternate to Lewis A. Alesen, John Ball, incumbent.

DR. ARTHUR VARDEN (San Bernardino County): I wish to place in nomination the name of Dr. John Ball to succeed himself.

VICE-SPEAKER CHARNOCK: The name of Dr. John

Ball has been placed in nomination to succeed himself. Do I hear any further nominations? Hearing none, the chair declares the nominations closed.

Those who are in favor of Dr. Ball signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

VICE-SPEAKER CHARNOCK: Dr. Ball is elected.

The next order of business is the election of two members to the C.M.A.-C.P.S. Liaison Committee. Nominations for these two positions are in order.

Dr. Cass, do you care to tell us about this?

PRESIDENT DONALD CASS: It looks as though we appointed or ordered a new committee to take care of this detail. Last year they appointed this committee on the recommendation of Dr. Bender and Orrin Cook's committee. Now, if we have this Liaison Committee in addition to that, we are going to have another Chandler Committee and we will duplicate our efforts. I would suggest to those who appoint the new Liaison Committee that my own recommendations would include Dr. Bender.

VICE-SPEAKER CHARNOCK: May we have nominations for these two positions? The two positions are to the C.M.A.-C.P.S. Liaison Committee.

DR. REUBEN ZUMWALT (San Francisco County): I nominate Dr. Bender.

VICE-SPEAKER CHARNOCK: Dr. Bender has been nominated.

DR. HARTZELL RAY: I would like to nominate Dr. Farthing from San Mateo County, who introduced the resolution.

VICE-SPEAKER CHARNOCK: We have two nominations. Do I hear any others? The chair hearing no other nominations declares them closed.

Those who are in favor of Dr. Bender and Dr. Farthing being the two members of the C.M.A.-C.P.S. Liaison Committee will signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

VICE-SPEAKER CHARNOCK: They are elected.

At this time we will have the announcement by the Secretary of the Council's nominations of members of Standing Committees. Dr. Green, chairman. Will Dr. Green please come up and give his list, chairman of Committee on Committees.

REPORT OF COMMITTEE ON COMMITTEES

DR. JOHN W. GREEN: Mr. Speaker, members of the House: We made an effort at this time to secure for you some of the best men in our Association. We have always made that effort since we felt it was the consensus of the House that perhaps it would be better for everybody concerned if some Councilor might sit on our committees.

Not being able to give you a Councilor in every instance, we have, however, in almost every instance given you a man with Councilor experience, which we feel is the equivalent of a Councilor, if not better.

The first committee is that of Scientific Work, composed as follows: Clayton Mote, San Francisco; Robert L. Dennis, San Jose; Howard F. West, Los Angeles; Albert C. Daniels, ex-officio, San Francisco; Paul C. Samson, ex-officio, Secretary of the Section on Surgery, San Francisco; James Malcolm Stratton, ex-officio, Section on Medicine, Oakland.

Committee on Public Policy and Legislation. In this instance we felt that it was to the best interest of the entire Association that we should not change this committee. We had the recommendation of Dr. Murray also to this effect that he had his legislative committee so well organized that any change in the personnel of that committee might result in a less efficient group. So, we will name the committee again as it served last year: Peter Blong, Alhambra; Dwight H. Murray, chairman, Napa; Anthony Diepenbrock, San Francisco.

Committee on Medical Defense: H. Clifford Loos, chairman, Los Angeles; Leslie B. Magoon, San Jose; Otto Diederich, Fresno.

Committee on Medical Education and Medical Institutions: Francis Scott Smyth, San Francisco; Lewis T. Bullock, Los Angeles; Laurence Montgomery, San Francisco.

Committee on Hospitals, Dispensaries, and Clinics: Howard C. Miles, Salinas; John B. Hamilton, chairman, Glendale; Jay J. Crane, Los Angeles.

Committee on Medical Economics: Arthur A. Kirchner, chairman, Los Angeles; Hollis L. Carey, Gridley; L. H. Fraser, Richmond.

Committee on Associated Societies and Technical Groups: J. Norman O'Neill, Los Angeles; Robert A. Scarborough, chairman, San Francisco; Hartzell Ray, San Mateo.

Committee on History and Obituaries: E. T. Remmen, Glendale; Dewey R. Powell, Stockton, chairman; J. Marion Read, San Francisco.

Committee on Industrial Practice: Jerome W. Shilling, Los Angeles, chairman; Raymond M. Wallerius, Sacramento; E. Vincent Askey, Los Angeles.

Committee on Postgraduate Activities: Carroll B. Andrews, Sonoma; Edward C. Rosenow, chairman, Pasadena; John D. Ball, from the Council, Santa Ana.

Committee on Public Relations, and this we thought was one of our most significant and fine committees. I think we spent more time on this committee than any other in our deliberations on who might be on this committee: Dwight H. Murray, Napa; Arthur A. Kirchner, Los Angeles; Robert A. Scarborough, San Francisco; H. Gordon MacLean, Oakland; Lewis A. Alesen, Los Angeles; J. Lafe Ludwig, Los Angeles; Frank A. MacDonald, Sacramento.

Physicians' Benevolence Committee. We are retaining the old committee for two reasons: One is that it has been an eminently satisfactory committee. Another is that we haven't found too many takers for this job. (Laughter.) Elizabeth Mason Hohl, Los Angeles; John W. Sherrick, Oakland; Axcel E. Anderson, chairman, Fresno.

This is a new committee now that we are naming for you, the Committee on Military Affairs and Civil Defense: Frank F. Schade, Los Angeles; William L. Bender, San Francisco; Justin J. Stein, chairman, Los Angeles.

In reviewing the reports of the Standing Committees for 1950, your committee feels and notes the lack of activity in some groups which we feel also is partly due to a lack of initiative on the part of some members of the Standing Committees, and also partly due to the failure of the Council to properly funnel information and direction to these committees. Respectfully submitted, Jay J. Crane, Ivan C. Heron, C. V. Thompson, John W. Green, chairman.

VICE-SPEAKER CHARNOCK: Thank you very much, Dr. Green, and we thank all your committee for this magnificent piece of work.

We will have to have the House approval of these committees. All those who are in favor of approving these committees will signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

VICE-SPEAKER CHARNOCK: They are approved.

The next order of business is the Report of Reference Committee No. 1 on Reports of Officers, the Council and Standing and Special Committees, J. Lafe Ludwig, chairman. Dr. Ludwig!

REPORT OF REFERENCE COMMITTEE No. 1

DR. J. LAFE LUDWIG: Mr. Speaker, members of the House of Delegates: I wish to express my thanks to Dr. J. Needham Martin of San Bernardino County and Dr. James B. Graeser of Alameda County for their fine cooperation and assistance on the work of Reference Committee No. 1.

Section One:

Your committee has reviewed the reports of the General Officers, with the exception of the report of the Secretary-Treasurer and the Executive Secretary, whose reports will be reviewed by Reference Committee No. 2. We wish to offer special commendation to our retiring President, Dr. Donald Cass, and to the President-Elect, Dr. H. Gordon MacLean, for their untiring efforts this past year in traveling throughout the state to bring the actual working of the California Medical Association to each and every member of the component county medical societies and to the members of the Woman's Auxiliaries.

Your committee recommends the approval of these reports. Mr. Speaker, I move the adoption of this section of the report.

. . . The motion was seconded. . . .

VICE-SPEAKER CHARNOCK: It has been moved and seconded that we accept this section of the report. Those who are in favor will signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

VICE-SPEAKER CHARNOCK: So ordered.

DR. J. LAFE LUDWIG:

Section Two:

Your committee has reviewed the report of the Council. We wish to give special commendation to the Council of the California Medical Association for contributing $100,000 to the non-profit corporation of the A.M.A. for the subsidization of medical schools.

Your committee recommends the approval of this report, Mr. Speaker. I move the adoption of this section of the report.

. . . The motion was seconded. . . .

VICE-SPEAKER CHARNOCK: It has been moved and seconded we accept this section of the report. Those who are in favor will signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

VICE-SPEAKER CHARNOCK: It is accepted.

DR. J. LAFE LUDWIG: Your committee feels that it is apropos at this time to take up the three resolutions which were presented to it.

A supplemental resolution as submitted by the Council is hereby presented for your action:

Resolved, That the House of Delegates of the C.M.A. express its complete support of the Student American Medical Association and urge upon the component county medical societies their full cooperation with the chapters of this organization which are or will be formed in the medical schools of California; and be it further

Resolved, That the House of Delegates adopt a policy of making available to the California members of the Student American Medical Association annual subscriptions to the official journal CALIFORNIA MEDICINE at an annual rate of $1 per year, the additional $2 per year required by postal regulations to be supplied by the Association in its annual budget; and be it further

Resolved, That the adoption of the above recommendation would make the further publication of *Future M. D.* unnecessary, wherefore its publication should be discontinued and the thanks of the Association extended to its editors who have so capably filled the gap during the formation of the Student American Medical Association.

Your committee has made the following addition: We recommend that a page of CALIFORNIA MEDICINE be devoted to the discussion of problems of the medical student, intern, and resident. The committee further recommends that adequate space be given to economics as applied to the practice of medicine.

Mr. Speaker, we recommend the adoption of the resolution as amended.

Mr. Speaker, I move the adoption of this section of the report.

. . . The motion was seconded. . . .

VICE-SPEAKER CHARNOCK: It has been moved and seconded that we adopt this section of the report. Those who are in favor will signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

VICE-SPEAKER CHARNOCK: It is accepted and so recorded.

DR. J. LAFE LUDWIG: Another supplemental resolution as submitted by the Council is hereby presented for your action.

Gentlemen, before I start this resolution I would like to call your attention to the wording in this resolution. It applies to EMIC, Emergency Maternity and Infant Care, as applied during World War II. There is some talk now of this resolution being brought before the Congress of the United States. This resolution is being offered by the Council of the California Medical Association. I again ask your indulgence in paying special attention to the wording in this resolution:

Resolved, That in view of certain legislation now pending in Congress on the subject of providing medical services for the wives and infant children of enlisted men in the Armed Forces, the California Medical Association go on record as expressing support of the principle of giving such aid to the families of our fighting men in cases of hardship, without at the same time creating any interference with the practice of medicine, choice of physician, or with current hospitalization procedures, and wherever possible through the use of existing medical care and hospitalization prepayment plans working within the framework of medical and hospital organizations.

Mr. Speaker, we recommend the adoption of this resolution.

Mr. Speaker, I move the adoption of this section of the report.

. . . The motion was seconded. . . .

VICE-SPEAKER CHARNOCK: Is there any discussion to this? It has been moved and seconded that we accept this section of the report. Those who are in favor will signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

VICE-SPEAKER CHARNOCK: It is accepted.

DR. J. LAFE LUDWIG: Your committee feels that the resolution offered by Dr. Burt L. Davis of San Mateo County, Resolution No. 10, should be taken up at this time.

Mr. Speaker, we recommend the adoption of this resolution.

Mr. Speaker, I move the adoption of this section of the report.

. . . The motion was seconded. . . .

VICE-SPEAKER CHARNOCK: Is there any discussion?

. . . There were calls of "What is the resolution?"

VICE-SPEAKER CHARNOCK: There is still some question about this resolution, Dr. Ludwig. Perhaps you could read it.

DR. J. LAFE LUDWIG: Resolution No. 10 as proposed by Dr. Burt L. Davis of Santa Clara County reads:

"WHEREAS, There are many naval and military posts in California located within reasonable distances of established civilian medical facilities; and

WHEREAS, The personnel in these military posts frequently maintain their families in these neighboring communities; and

WHEREAS, A considerable portion of the time of the medical departments of the Armed Services is required in attending to the dependents of the military personnel and not to active military problems; and

WHEREAS, California Physicians' Service is ideally adapted for entering into a contract with the Armed Forces to render medical attention to these dependents; and

WHEREAS, Such a contract would efficiently conserve the use of medical personnel within the Armed Forces and thereby lessen the need for greater expansion of the military program; and

WHEREAS, Similar contracts with the Veterans Administration and with the Agricultural Workers, to name but two, have established the propriety and precedence for the custom of governmental agencies contracting with California Physicians' Service for medical care; now, therefore, be it

Resolved, That the House of Delegates of the California Medical Association encourage, authorize and request the California Physicians' Service to enter into negotiation with the Armed Forces for contracts whereby the families and dependents of military personnel may be cared for as private patients in the proper fashion by the civilian physicians in the neighboring communities in which they reside within this state; and be it further

Resolved, That the California Medical Association call the attention to this program of the various other state and national physicians' health plans in order that they be encouraged to enter into similar arrangements."

VICE-SPEAKER CHARNOCK: It has been moved and seconded that we accept this section of the report. Is there still any discussion?

DR. WILLIAM G. DONALD (Alameda-Contra Costa County): Mr. Chairman, I move to amend the next to the last paragraph by the words "providing physicians may practice without government regulations." That same motion was passed by the California Physicians' Service. The only difference is that in the next to the last paragraph the words were added, "providing that the physicians of California could practice without government regulation," and that the funds held in trust by the California Physicians' Service be not jeopardized. I offer that as an amendment to the resolution.

. . . The motion was seconded. . . .

VICE-SPEAKER CHARNOCK: The amendment has been made and seconded. We will vote first upon the amendment. Is there any discussion of this?

Those who are in favor of this amendment will signify by saying, "Aye."

. . . The motion was put to a vote and the amendment was passed. . . .

VICE-SPEAKER CHARNOCK: We will now vote on this section as amended. Those who are in favor will signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

VICE-SPEAKER CHARNOCK: It is passed. Proceed, Dr. Ludwig.

DR. J. LAFE LUDWIG:

Section Three:

Your committee has reviewed the reports of the President of the Trustees of the California Medical Association, the Councilors, and the Councilors-at-Large.

Your committee recommends the approval of these reports.

Mr. Speaker, I move the adoption of this section of the report.

. . . The motion was seconded. . . .

VICE-SPEAKER CHARNOCK: It has been moved and seconded we accept this section of the report. Is there any discussion? Those who are in favor will signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

VICE-SPEAKER CHARNOCK: It is passed. Proceed, Dr. Ludwig.

DR. J. LAFE LUDWIG:

Section Four:

Your committee has reviewed the report of the Legal Department. We wish to offer a special commendation to our general counsel, Peart, Baraty and Hassard. We particularly thank Mr. Howard Hassard for his efforts in behalf of California medicine.

Your committee recommends the approval of this report.

Mr. Speaker, I move the adoption of this section of the report.

. . . The motion was seconded. . . .

VICE-SPEAKER CHARNOCK: It has been moved and seconded that this section of the report be accepted. Those who are in favor of this will signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

VICE-SPEAKER CHARNOCK: It is passed. Proceed.

DR. J. LAFE LUDWIG:

Section Five:

Your committee has reviewed the reports of the Editor and Editorial Board of CALIFORNIA MEDICINE. We commend the editor, Dr. Dwight L. Wilbur, and the Editorial Board for continuing the high quality of CALIFORNIA MEDICINE so that it remains the outstanding publication of its type in the United States.

Your committee recommends the approval of this report.

Mr. Speaker, I move the adoption of this section of the report.

. . . The motion was seconded. . . .

VICE-SPEAKER CHARNOCK: It has been moved and seconded that we accept this section of the report. Those in favor will signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

VICE-SPEAKER CHARNOCK: It is passed.

DR. J. LAFE LUDWIG:

Section Six:

Your committee has carefully reviewed the reports of the following committees: Executive Committee, Committee on Associated Societies and Technical Groups, Auditing Committee, Committee on Health and Public Instruction, Committee on Hospitals, Dispensaries and Clinics, Committee on Industrial Practice, Committee on Medical Defense, Committee on Medical Economics, Committee on Medical Education and Medical Institutions, Committee on Membership and Organization, Committee on Publications, Committee on Public Relations, Committee on Scientific Work, the Physicians' Benevolence Committee, the Advisory Planning Committee, the Blood Bank Commission, the Committee on Rural Medical Service, the Committee on Industrial Health, the Cancer Commission and the Industrial Accident Fee Schedule Committee.

Your committee recommends the approval of these reports.

Mr. Speaker, I move the adoption of this section of the report.

. . . The motion was seconded. . . .

VICE-SPEAKER CHARNOCK: It has been moved and seconded that we adopt this section of the report. Is there any discussion? Those who are in favor will signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

VICE-SPEAKER CHARNOCK: It is passed.

DR. J. LAFE LUDWIG:

Section Seven:

Your committee has reviewed the report of the Committee on History and Obituaries. We urge the cooperation from each and every member of the California Medical Association in forwarding pertinent historical data to Dr. George H. Kress, who is writing a history of each county society.

Your committee recommends the approval of this report.

Mr. Speaker, I move the adoption of this section of the report.

. . . The motion was seconded. . . .

VICE-SPEAKER CHARNOCK: Is there any discussion? Those in favor of this section of the report will signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

VICE-SPEAKER CHARNOCK: It is passed.

DR. J. LAFE LUDWIG:

Section Eight:

Your committee has reviewed the report of the Committee on Postgraduate Activities. We call attention to the supplemental report which was presented to the committee by the chairman, Dr. John Ruddock:

"Herewith is a recapitulation of expenses and activities of your Postgraduate Committee during the year 1950. Our activities have been widespread and we have succeeded in establishing an excellent liaison with the five medical schools in the State of California as well as setting a practical pattern for organized medicine to participate in and offer extension medical education on a postgraduate level to its membership.

POSTGRADUATE ACTIVITIES

Administration		$ 8,661.86
Salary, director	$6,000.00	
Office and sundries	2,661.86	
Travel		2,000.46
Director and secretary	1,066.14	
Speakers	655.27	
C.M.A. Committee	279.05	
Honoraria		2,000.00
Meals, etc., req. room, inst. speakers		739.07
Exhibit at 1950 convention		187.46
Signs and printing at institutes		98.99
		13,687.84
Registration fees collected		3,295.00
Total cost to C.M.A.		$10,392.84
No. of institutes held	5	
Total attendance	1,170	
Paid registration	659	
Nurses res. and inst.	74	
Attendance at county meetings	437	
Total cost of institutes	$4,063.28	
Average cost per person attending	5.54	
Total cost of institutes (5)	4,063.28	
Total moneys collected	3,295.00	
Total deficit	768.28	
Average cost per institute	812.65	

Your committee recommends the approval of this report.

Mr. Speaker, I move the adoption of this section of the report.

. . . The motion was seconded. . . .

VICE-SPEAKER CHARNOCK: It has been moved and seconded that this section of the report be accepted. Is there any discussion? Those who are in favor will signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

VICE-SPEAKER CHARNOCK: It is accepted. Proceed.

DR. J. LAFE LUDWIG:

Section Nine:

Your committee accepts the oral report of Dr. Dwight Murray, chairman of the Committee on Public Policy and Legislation. We commend him for the splendid work he is doing in our behalf.

Your committee recommends the approval of this report.

Mr. Speaker, I move the adoption of this section of the report.

. . . The motion was seconded. . . .

VICE-SPEAKER CHARNOCK: It has been moved and seconded that we adopt this section of the report. Those who are in favor will signify by saying. "Aye."

. . . The motion was put to a vote and it was carried. . . .

VICE-SPEAKER CHARNOCK: It is passed.

DR. J. LAFE LUDWIG:

Section Ten:

Your committee has reviewed the report of the Special Committee on C.P.S. administrative changes.

Your committee recommends the approval of this report.

Mr. Speaker, I move the adoption of this section of the report.

. . . The motion was seconded. . . .

VICE-SPEAKER CHARNOCK: It has been moved and seconded that we accept this section of the report. Is there any discussion? Those in favor will signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

VICE-SPEAKER CHARNOCK: It is accepted.

DR. J. LAFE LUDWIG:

Section Eleven:

Your committee has reviewed the report of the C.P.S. Liaison Committee as presented on the floor of the House.

Your committee does not approve of the report because there are two controversial issues involved re C.P.S.:

1. The income ceiling; and

2. The ratification of the proposed fee schedule.

Your committee recommends that this report be not approved.

Mr. Speaker, I move the adoption of this section of the report.

Mr. Speaker, I move the adoption of the report as a whole, as amended.

VICE-SPEAKER CHARNOCK: We will first take the section. Do I hear a second to that?

. . . The motion was seconded. . . .

VICE-SPEAKER CHARNOCK: It has been moved and seconded that this section of the report be accepted. Is there any discussion? Those who are in favor will signify by saying. "Aye."

. . . The motion was put to a vote and it was carried. . . .

VICE-SPEAKER CHARNOCK: This section of the report is accepted.

Now, it has been moved that we accept the report as a whole, as amended. Do I hear a second to that?

. . . The motion was seconded. . . .

VICE-SPEAKER CHARNOCK: It has been moved and seconded that we accept Referenee Committee No. 1's report as a whole, as amended. Is there any discussion? Those who are in favor will signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

VICE-SPEAKER CHARNOCK: It is accepted as amended.

Thank you. Dr. Ludwig. (Applause.)

The next order of business is the report of Reference Committee No. 2 on the reports of the Secretary-Treasurer and the Executive Secretary, on Budget and Dues, Dr. Stanley Truman, chairman.

REPORT OF REFERENCE COMMITTEE No. 2

DR. STANLEY TRUMAN: Mr. Speaker and members of the House of Delegates: This committee was composed of G. Wendell Olson of Orange County, Leslie B. Magoon of Santa Clara County, and Stanley Truman of Alameda-Contra Costa County.

Your committee has reviewed the report of the Secretary and recommends the acceptance of this report. We wish to express the appreciation of the members of the House of Delegates and the members of the California Medical Association for his efforts in our behalf.

Mr. Speaker, I move the adoption of this section of the report.

. . . The motion was seconded. . . .

VICE-SPEAKER CHARNOCK: It has been moved and seconded that we adopt this section of the report. Is there any discussion? Those who are in favor of accepting this section of the report will signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

VICE-SPEAKER CHARNOCK: It is accepted.

DR. STANLEY TRUMAN: The report of the Executive Secretary has been reviewed, and your committee recommends its acceptance as printed. We wish to express our deep appreciation of the capable services and enthusiastic help of Mr. John Hunton through the year.

Mr. Speaker, I move the adoption of this section of the report.

. . . The motion was seconded. . . .

VICE-SPEAKER CHARNOCK: It has been moved and seconded that we adopt this section of the report. Is there any discussion? Those who are in favor will signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

VICE-SPEAKER CHARNOCK: The report of the Treasurer has been published in the Annual Bulletin, and this has been made available to the members of the House of Delegates. It consists primarily of an audit by the certified public accountants, the auditing firm of John F. Forbes and Company.

Our committee recommends that the Auditing Committee and the Treasurer supply a breakdown of the expenses and income on the major items on a departmental basis rather than on a total basis, this to be presented in the same general form as the proposed budget.

Our committee has carefully inspected the Treasurer's report and also the report of the certified public accountants, and found both reports to be in order, and we wish to express our appreciation of the splendid work of the Treasurer of the past year.

Mr. Speaker, I move the adoption of this section of the report.

. . . The motion was seconded. . . .

VICE-SPEAKER CHARNOCK: It has been moved and seconded that we adopt this section of the report. All those in favor will signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

VICE-SPEAKER CHARNOCK: It is accepted.

DR. STANLEY TRUMAN: Concerning the resolution regarding distribution of CALIFORNIA MEDICINE to medical students of California, our committee feels that in view of the fact that the same subject has been disposed of by the preceding recommendation of Reference Committee No. 1 and action of this House, no action is necessary on this resolution.

A MEMBER: Which resolution?

DR. STANLEY TRUMAN: The resolution regarding the distribution of CALIFORNIA MEDICINE to medical students.

Your Reference Committee now presents to the House of Delegates the proposed budget for the fiscal year which will start next July first. Mimeographed copies are in your hands.

In presenting this proposed budget your committee wishes to call the attention of the House of Delegates to the fact that this set of figures represents primarily a guide, not a hard-and-fast ruling on the amount of income or expenditure on any particular item. The Constitution of the Association gives the right to the Council to appropriate funds for such purposes as are encompassed in the statement of the purposes of the Association and are deemed advisable by the Council as a deliberative body. Consequently, the figures now before you represent primarily an appraisal of anticipated experience, an appraisal which must be amended in accordance with specific conditions which may confront the Council during the coming year.

In drawing up a budget the Association starts with its Auditing Committee, which then takes its proposals to the Council. After the Council has passed upon a proposed budget it comes to this Reference Committee, before which any member of the House of Delegates is privileged to appear.

The policy of the Auditing Committee and of the Council is to draw up a budget along conservative lines. Items of estimated income are calculated at a little less than the normal anticipation and items of expenditure are stated in round figures which will probably provide a small surplus over actual needs. Thus there is a little leeway in the budget which may be used during the year by the Council to meet specific problems which arise and which need financial support.

The policy of the Council is to secure this elasticity by a conservative approach to the budget, in the knowledge that each year brings some special problems which cannot be foreseen at this time but which will need support before our next annual meeting.

Where the Council does make special appropriations during the year, the authenticity of such appropriations is carefully checked by the certified public accountants who audit the books of the Association.

Your Reference Committee wishes to give you this explanation of the manner in which the budget is drawn up, so that you may understand that there is no attempt to over-budget expense items or to set the annual dues at a level which would return a surplus to the Association. Surplus funds are now in excellent condition and there is no need to increase them. The one object here is to present a balanced budget which will take care of our needs for the coming year.

Your committee notes that the current allowances for automobile travel and for per diem expenses for officers and Councilors are considerably below present-day costs, and recommends that a reappraisal be made on these items on a realistic basis so that these members who devote so much time to the affairs of the Association may at least be permitted to carry on their work without personal loss. Under the old By-Laws these allowances were specified, while the new By-Laws permit more up-to-date allowances to be made.

It is the opinion of this committee that in Item No. 25 on public relations the amount of $9,000 per year now paid as retainer for a firm of public relations counsel could be more profitably spent by developing a specific department of public relations within the C.M.A. structure. We feel that the formation of this department would result in a better correlation between the activities of the C.M.A. and the county medical societies in the field of public relations, that it should be under the direction of a full-time director, and that it should be directly responsible to the Advisory Planning Committee.

Mr. Speaker, I move the adoption of this budget as presented, showing income of $423,000 and expenditures of $411,250 for the 1951-1952 fiscal year for the Association, and income of $143,250 and expense of $135,750 for the official journal.

. . . The motion was seconded. . . .

VICE-SPEAKER CHARNOCK: It has been moved and seconded that this section of the report be accepted. Is there any discussion?

DR. WILLIAM G. DONALD (Alameda-Contra Costa County): Mr. Chairman, there are four items in here: One for $100,000, Department of Public Relations; Public Policy and Legislation $75,000; Cancer Commission $19,000; committees' expense $20,000. I think it would be of interest to the House of Delegates to have those broken down further.

VICE-SPEAKER CHARNOCK: Dr. Lum, Director of the Budget.

DR. DONALD LUM: This item of $100,000, Department of Public Relations, will be utilized in large part in the grass-roots program which has been planned by the Advisory Planning Committee.

As you see by the budget, there is a reduction of $50,000.

As you know, *California Caravan* was discontinued as of January 1, and this $100,000 item is to continue the program that was suggested and planned one year ago. That program will be presented in detail, and is being planned in detail by the Advisory Planning Committee.

Public Policy and Legislation, you will note that there is a reduction shown in that figure. Next year the Legislature is not in session, so it was felt that amount could be reduced.

You will realize, of course, that next year will be an election year and will entail a certain amount of expense.

The figure of $19,000 of the Cancer Commission is a budget suggested by the Cancer Commission. It includes the salary of the director, plus their development of their program and the production of a certain amount of manuals. The committees' expense has been increased because it has been found that more committees have been utilized in the past year, and they have been more active as a result, with an increased expenditure.

Does that answer your question, Dr. Donald?

DR. WILLIAM G. DONALD (Alameda-Contra Costa County): Yes.

VICE-SPEAKER CHARNOCK: Dr. Donald, are you satisfied, sir?

DR. WILLIAM G. DONALD (Alameda-Contra Costa County): Partially, sir. (Laughter.)

DR. DONALD LUM: While I am here, if there are any other questions I would be very happy to answer them.

VICE-SPEAKER CHARNOCK: Are there any more questions to pose to Dr. Donald Lum regarding the budget?

DR. DONALD LUM: You will note in the budget on CALIFORNIA MEDICINE, there is one increase of $20,000 in printing. That is due to the increased cost of printing.

VICE-SPEAKER CHARNOCK: Dr. Truman, will you proceed, sir?

DR. STANLEY TRUMAN: I think the next order of business is a vote on this motion that was made and seconded.

VICE-SPEAKER CHARNOCK: It has been moved and seconded that we accept this section of the report of the budget. Is there any further discussion? Those in favor will signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

VICE-SPEAKER CHARNOCK: It is accepted.

DR. STANLEY TRUMAN: Mr. Speaker, I move that the dues for 1951-1952 be set at $40 per active member.

. . . The motion was seconded. . . .

VICE-SPEAKER CHARNOCK: That is for the calendar year 1952, is it not?

DR. STANLEY TRUMAN: I stand corrected.

VICE-SPEAKER CHARNOCK: Do you move that adoption, sir?

DR. STANLEY TRUMAN: I move that the dues for the 1952 calendar year be set at $40 per active member.

. . . The motion was seconded. . . .

VICE-SPEAKER CHARNOCK: Is there any discussion about this? It has been moved and seconded that the dues for the 1952 calendar year be set at $40. Those who are in favor will signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

VICE-SPEAKER CHARNOCK: It is accepted.

DR. STANLEY TRUMAN: Mr. Speaker, I move the adoption of the report as a whole.

. . . The motion was seconded. . . .

VICE-SPEAKER CHARNOCK: Just a moment, Dr. Daniels has a question.

DR. DANIELS: I have one point to add here which may be an item of business at this time, Mr. Speaker.

The new Constitution provides: "Funds may be raised by any of the following methods: (a) publications of the association; (b) voluntary contributions; (c) bequests, legacies, devises and gifts; (d) special assessments levied by the House; and (e) in any other manner approved by the House."

Now, the Committee on Postgraduate Activities felt that their activities would be better if they charged a $5 registration fee. That was brought before the Council and approved by them. This fee is charged where each person enrolls in a postgraduate course as offered by the Postgraduate Committee, and that money is paid into the general fund, but it seems to me at least that that should be officially approved by the House of Delegates since it is mentioned as such in the new Constitution.

A MEMBER: I so move.

VICE-SPEAKER CHARNOCK: Do we have the consent of the House to take this up first, then? Is there a second to this motion?

. . . The motion was seconded. . . .

VICE-SPEAKER CHARNOCK: It has been moved and seconded that the outline for the postgraduate studies as outlined by Dr. Daniels be accepted. Those who are in favor will signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

VICE-SPEAKER CHARNOCK: It is accepted.

It has now been moved and seconded that the report of Reference Committee No. 2 be accepted as a whole. Is there any discussion to this? Those who are in favor will signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

VICE-SPEAKER CHARNOCK: It is accepted and so recorded.

DR. STANLEY TRUMAN: May I thank the members of the committee for their efforts, and Dr. Lum for his patience and his work in our behalf.

VICE-SPEAKER CHARNOCK: May we extend our thanks to Dr. Truman and his committee for their work. (Applause.)

. . . Speaker Alesen now resumes the chair. . . .

SPEAKER ALESEN: Reference Committee No. 3, Dr. Lyle Craig, chairman. Dr. Craig is recognized.

REPORT OF REFERENCE COMMITTEE No. 3 (continued)

DR. LYLE CRAIG: Mr. Speaker, members of the House of Delegates: I would like first to thank the two crutches by whose aid I reached this point, Dr. Loos and Dr. Gibbons, who were members of the committee.

I should also like to express our thanks to Mr. Hunton's secretary, Miss Laughlin, who helped us a great deal.

We will consider first the amendments to the By-Laws which have been proposed, taking them up in the order of their presentation.

The mimeographed sheets which you hold before you contain these amendments, together with our recommendations on them. In each case, since the amendments as a rule were not very long, we have included on the same sheet the amendment followed by our recommendation.

The first amendment was presented 48 hours ago by Dr. Carson of San Francisco, regarding the addition of a paragraph prohibiting the acceptance of rebates, and reads as you see it on the manuscript. It isn't necessary, I think, for me to read it. It adds a section to Chapter XIII, Section 1. As you know, this paragraph is already in the previous document, which this replaces.

The committee discussed this measure at some length. There was no question involved as to disagreement with the ideal expressed. We were, however, uncertain as to the advisability of including in the By-Laws one isolated item from the Code of Ethics. However, we have decided in view of the preponderance of opinion expressed before the committee to recommend that this amendment do pass.

Mr. Speaker, I move we proceed to vote on this amendment.

. . . The motion was seconded. . . .

SPEAKER ALESEN: There is a motion to adopt this amendment. How will you act?

. . . There were calls of acclamation. . . .

DR. LESLIE B. MAGOON (Santa Clara County): May we discuss it?

SPEAKER ALESEN: Yes, Dr. Magoon.

DR. LESLIE B. MAGOON (Santa Clara County): No question can be raised as to the virtues of the ethical principle delineated by this proposed amendment. It is one of the more important principles of the Code of Ethics of the American Medical Association, and is also a part of the statutory law of California.

There is still another principle of ethics which some of us believe to be of even greater importance —the continued support of whose validity is vital to the preservation of the private practice of medicine as we know it. That principle provides that

corporations shall not practice medicine. It is not proposed that this principle be added to the By-Laws.

I cite these to emphasize that I agree fully with the importance of these ethical principles and the desirability of their frequent publication and wide dissemination to the profession. But I do not believe that either of these considerations justifies the inclusion of a principle of ethics in the By-Laws of this Association. Many of you will feel it is a minor matter whether or not it is so included. I hope to persuade you otherwise.

By definition, a Constitution and By-Laws constitute a specification of the purposes and of the organic structure of an association, and the partition of powers, duties and privileges between its legislative, judicial and executive bodies and officers.

The recently adopted Constitution and By-Laws do these things with commendable clarity and brevity. Two special committees of this Association and two Reference Committees of this House labored for four years to produce a streamlined document which was unequivocally easy of understanding and to which reference would be simple and quick.

This amendment, proposed even before the body is cool, represents the first effort to vitiate that accomplishment by adding irrelevant items which are not consistent with the purposes of the By-Laws. It represents the head of the camel, and it must be driven from the tent if a whole body of irrelevant amendment is not to follow. If this first step is to be followed by its logical sequels, we shall end with the whole Code of Ethics as part of our By-Laws.

The omission of this amendment will not vitiate nor weaken our Code of Ethics, nor will its inclusion strengthen their enforcement. Our new By-Laws already provide that our Association is governed by the Code of Ethics of the American Medical Association, and empowers this House to adopt such other principles of ethics as it may desire. It is a matter of legal fact that any principle of ethics adopted by us which is inconsistent with the Code of the A.M.A. is unenforceable.

May I be permitted to point out that the inclusion of a principle of ethics in the By-Laws of this Association is as inconsistent and irrelevant as the inclusion of a paragraph concerning criminal abortion in an Alcohol Beverage Control Act, a legislative maneuver which Ben Read decried before us Sunday. It need not follow that, to oppose such a maneuver, one favors criminal abortion.

On the grounds I have cited, I urge very strongly that this proposed amendment be defeated. (Applause.)

SPEAKER ALESEN: In paragraph three the word "disagreement" is printed, and it must be "agreement," "involved as to the agreement with the ideal expressed."

Dr. Gibbons.

DR. HENRY GIBBONS III (San Francisco County): Just a brief word about this amendment. Mr. Hassard says as a purist Dr. Magoon is dead right. We, however, in the committee did feel, after considerable discussion, that this particular Code of Ethics was so easily violated that it might be necessary to keep it before the attention of the medical profession and the insulary organizations, and that is the only reason we continued to keep it in the By-Laws.

Secondly, there is no reason why if somebody else feels there should be another ethical principle in the By-Laws, that couldn't be added as well.

We did feel this was important to keep before the attention of the profession.

SPEAKER ALESEN: Is there further discussion on this amendment?

. . . The question was called for. . . .

SPEAKER ALESEN: Dr. Truman.

DR. STANLEY TRUMAN: If we wish to pass a resolution of this nature, it seems to me it would be more appropriate in supporting this principle that we do pass it as a resolution instead of incorporating it in the By-Laws.

SPEAKER ALESEN: Is there further discussion?

. . . The question was called for. . . .

SPEAKER ALESEN: If not, are you ready for the question? You are voting on the adoption of the amendment to the By-Laws. All those in favor signify by saying, "Aye."

. . . The motion was put to a vote. . . .

SPEAKER ALESEN: It being quite obvious two-thirds majority is lacking, the amendment is defeated.

Dr. Craig, will you continue?

DR. LYLE CRAIG: Amendment number two regarding the allocation of delegates in the House of Delegates, which has been introduced by Dr. Miller of San Mateo.

The amendment is before you. After hearing the discussion on the subject it was still the feeling of the committee that membership in the House should be determined by at least a majority of the 50 members which a delegate presumably represents. We, therefore, recommend that this amendment do not pass.

Mr. Speaker, I move we proceed to vote on this matter.

SPEAKER ALESEN: Now, since this is a By-Law amendment, and we are going to keep the record straight all the way through, when you vote you are voting for or against the adoption of the amendment. Is that perfectly clear? Is there discussion?

DR. A. G. MILLER (San Mateo County): The intent of the amendment is obvious. I want to call to the attention of the House that out of 39 counties or sections represented, only four have a representation of seven or more delegates. The other 35 have representation of seven or under, and it is particularly this group of seven or under for whom we thought this particular amendment would apply. Most specifically, it would apply to those groups who have delegations from two to seven. That is, the two are automatically taken care of because now, with the

new By-Laws. that is the minimum number of delegates. It will mean in brief that some of our delegations in the counties in that group with two to seven delegates will lose a delegate on the change of the amendment.

Therefore, I ask you to consider it in that light. and hope that perhaps this amendment would pass as presentcd.

SPEAKER ALESEN: Pardon me. Was there a motion to adopt this amendment? Your Speaker apparently went to sleep on that.

A MEMBER: I move we adopt it.

SPEAKER ALESEN: Is there a second?

. . . The motion was seconded. . . .

SPEAKER ALESEN: Is there discussion? Are you ready for the question?

. . . The question was called for. . . .

SPEAKER ALESEN: All those in favor of adopting the amendment signify by saying, "Aye."

. . . The motion was put to a vote. . . .

SPEAKER ALESEN: It appearing quite obvious the two-thirds majority is lacking, the amendment fails of adoption.

Proceed, Dr. Craig.

DR. LYLE CRAIG: Amendment number three introduced by Dr. Kirchner of Los Angeles. I might say this was introduced at the instance of the committee, who felt that probably a majority of the members of this House of Delegates had not read the By-Laws, completely at least, and that possibly some of you might not know they provided for two regular sessions of the House of Delegates during the year. Thc amendment was, therefore, introduced for the purpose of giving you an opportunity to express your desires as to whether we should have them.

As it reads, it will eliminate the regular interim session, and you will have only one regular session plus whatever special sessions might be called.

To comply with the necessity of the occasion there is another change made in the By-Laws by this amendment so that resolutions presented to thc committees will be acted upon during the session and not lie on the table until the next session which, if this amendment is adopted, would mean they would lie on the table for a year, which is obviously not desirable.

The purpose of this resolution is to continue the present practice of having only one annual session and special sessions only as called in emergency. After hearing the discussion, there was no question as to the majority opinion favoring a single scssion. though it was suggested that it might be advisable, in order to facilitate the activities, to consider lengthening the duration of the session and to provide that resolutions to be introduced should be cleared through the component societies. These provisions, of course, are not a part of the amendment as considered. The committee recommends that this amendment do pass.

Mr. Speaker, I move we proceed to vote on this amendment.

SPEAKER ALESEN: Is there a motion to adopt this amendment?

. . . It was moved and seconded that the amendment be adopted. . . .

SPEAKER ALESEN: Is there discussion? Dr. Magoon is recognized.

DR. LESLIE B. MAGOON (Santa Clara County): This is of even greater importance than the last proposed amendment.

Proponents of this amendment, whose effect is to eliminate the provision for semi-annual meetings of the House of Delegates, must believe to some degree in any or all of the following:

1. An interim session is unnecessary.

2. It is too costly to the C.M.A., and/or the component societies.

3. It demands too much in time, money and effort from the individual delegate.

I shall argue those points in reverse order.

It is conceded that an interim session will demand an investment in time, money and effort practically twice that of a single session, unless some allowance is made for a lessening of the pressures that will result from the more leisurely and better organized consideration of business that will result from more frequent meetings. Delegates may well be buying a few more years of pre-coronary existence by spending two more days a year and a few more dollars in their positions as members of this House.

It is conceded, too, that there will be additional expense involved both to the C.M.A. and our counties if semi-annual sessions are held. In the C.M.A., it will be minor; I am informed by the Executive Secretary probably no more than $2,000. The Reference Committee on the budget felt it unnecessary to increase the amount allocated to sessions of the C.M.A. beyond that budgeted for a single session. So far as component societies are concerned, costs will depend on whether or not delegates' expenses are paid.

In my county, Santa Clara, they are paid; and our membership is unanimously of the opinion that that investment has paid an overwhelming return. We go so far as to pay the expenses of all our alternates, whether or not they are called to sit in the House, so that they will not be strangers to this House when they are promoted to delegates. We feel strongly that no society dollar we spend has yielded a better return, and we shall be happy to double the amount for the privilege of semi-annual meetings of the House.

Now, the first point for last consideration: Interim meetings of the House are unnecessary. May I point out that the strongest motive of this House in directing that the By-Laws be revised was a desire to increase the stature of the House of Delegates. It has always been in theory the senior body of the Association, but in practice it had not always so functioned.

It followed almost as cause and effect that if the House were to take a larger part in the conduct of the Association, it would have to meet often enough

to play its role efficiently. It could not drag its feet for a year to make decisions, the need for whose execution was immediate. There is no thought that the House can even approach the flexibility and rapidity of action of the Council, but shortening the interval between meetings to six months would make decisions of the House possible on at least reasonably current problems, and would lessen those circumstances where the House can be only an accomplice after the fact in a fait accompli.

The proposal that except in emergency proposed resolutions lie on the table between sessions would give an opportunity for a delegation to take them home for presentation to its constituents. We believe that that will result in a much greater feeling of participation by the rank and file, and will have a very salutary effect toward controverting the feeling of the average member that this House is a remote body in whose decisions his opinion plays no role.

In our county, at least, there is a great surge of interest in the C.M.A. just before the annual meeting; the rest of the year the Association is mentioned only to be damned. We should like that surge to happen twice a year, and we believe that the interim low point of lack of interest will be not only the shorter but less abysmal; in other words, the cycles will be shorter and the swing less wide.

For these reasons I am in favor of semi-annual sessions, and therefore opposed to this amendment. But I will concede that maybe my county is unique, and that perhaps those of you who feel that effort is greater than the return are right.

In any event, it is a matter of opinion the validity of which can be tested only by trial. I beg of you that you give us that trial. These provisions for an interim session are not frozen in perpetuity; they are in the By-Laws, which can be changed almost overnight, and they will assuredly so be changed if the interim session is irksome and unproductive.

I respectfully solicit a negative vote on this proposed amendment. (Applause.)

SPEAKER ALESEN: Is there further discussion?

. . . The question was called for. . .

SPEAKER ALESEN: Please note an affirmative vote by two-thirds refers to the status quo; that is, a situation in which only one annual session is held. A negative vote merely affirms the present status of the By-Laws in which two annual sessions are provided.

All those in favor of the amendment signify by saying, "Aye."

. . . The motion was put to a vote. . . .

SPEAKER ALESEN: The amendment fails of adoption.

Proceed, Dr. Craig.

DR. LYLE CRAIG: Amendment number four, introduced by J. M. de los Reyes of Los Angeles, is regarding the requirement of the Loyalty Oath. You will note that there are two new sections, one in Chapter V applying to the delegates and alternates, and one to Chapter XIII, a new section applying to the officers and employees of the Association.

Since you have the manuscript before you, it isn't necessary to read it. The discussion of this amendment produced a large attendance at the committee hearing and a prolonged and energetic discussion both pro and con. Since it will undoubtedly be discussed at length on the floor of this House, it is not necessary here to enumerate the many recommendations. The committee was unable to agree unanimously upon a recommendation, two of our members being in favor of the amendment and one opposed. Since the amendment requires a two-thirds vote, we are making, on the basis of this divided opinion, a majority recommendation of do pass.

Mr. Speaker, before proceeding to vote I should like to ask the permission of the floor for Dr. Gibbons.

SPEAKER ALESEN: Dr. Gibbons is recognized.

DR. HENRY GIBBONS III (San Francisco County): I should like to preface my remarks by stating that I have had a very cordial experience with the Reference Committee, and I have enjoyed very much the discussions we have gotten into, and have learned a great deal about procedures of the House that I didn't know before.

It was at the request of Dr. Craig and Dr. Loos that I am making the minority report, with the wish also of my delegation from San Francisco.

It is my belief that this amendment is unecessary and does not belong in the Constitution or By-Laws of the California Medical Association:

(1) Because it will not accomplish the purpose for which it is intended since any communist who so desires will sign the oath without hesitation;

(2) Because it makes office-holding subject to a political test and because it will set a precedent for more dangerous measures;

(3) Because there is no evidence that the California Medical Association has benefited by the existence of the Loyalty Oath during the past year. Indeed, there has developed such varied differences of opinion that there is a threat of a serious split in our ranks;

(4) Because such an oath is compulsory and therefore objectionable to a great many who see in it a threat to their individual liberty and freedom.

(5) Because it is discriminatory against individuals not taking the oath;

(6) Because if a sincere individual refuses to sign the oath it can be said he is among those who are disloyal to the United States. This is a declaration of guilt by association and violates the Bill of Rights of our U. S. Constitution, which states that a man is innocent until proven guilty;

(7) Because I believe in our democratic processes of government and feel as they are practiced in this organization there is no danger of serious communist infiltration in the ranks of our officers.

In conclusion, therefore, I believe if this problem is considered without emotion it will become evident that a Loyalty Oath of this type will do the C.M.A. and its members much more harm that the good its well-intentioned proponents desire. (Applause.)

DR. WILBUR BAILEY: Mr. Speaker, I move for an Executive Session.

SPEAKER ALESEN: A motion has been made for Executive Session. Is there a second?

. . . The motion was seconded. . . .

SPEAKER ALESEN: All those in favor of going into Executive Session please signify by saying, "Aye."

. . . The motion was put to a vote. . . .

SPEAKER ALESEN: The motion is lost.

Is there a motion to adopt this amendment?

DR. LYLE CRAIG: Mr. Speaker, I move we adopt this amendment.

. . . The motion was seconded. . . .

SPEAKER ALESEN: Dr. Cass is recognized.

PRESIDENT DONALD CASS: I believe I had the privilege last year of standing up with this oath in the Council, and I stand up for it again. I think a body as smart and big and aggressive as this group should not be so childish they object to signing an oath which, to the public, means an affirmation of this loyalty.

I sincerely hope you pass this oath, and I ask for a secret ballot on it when you do it. (Applause.)

SPEAKER ALESEN: Dr. Davis is recognized.

DR. DAVIS: I was going to request a secret ballot also.

SPEAKER ALESEN: Dr. de los Reyes.

DR. DE LOS REYES: Mr. Speaker, fellow Americans: I am cognizant of the fact that in proposing this and standing here before you I am going to be severely criticized by many, and even the human qualities of my mother are going to be doubted.

On the other hand, gentlemen, I want to take issue with the minority report. There is nothing in this oath or affirmation that would in any way hamper your belief in the Constitution of the United States, and your political beliefs, or in your religious creed.

Not long ago the County of Los Angeles passed the Loyalty Oath. Today, by coincidence, the Second District Court of Appeals of California affirmed that that Loyalty Oath which, if you read it, is a lot more stringent than what we have asked you to sign, states:

" 'Nothing in the affidavit in the slightest degree affects their political or religious beliefs. No constitutional right is imperiled; no hallowed principle is foresworn; no hazardous or difficult task is assigned.'

"In referring to the role played by county attorneys in fighting for the fulfillment of the terms of the loyalty oath, the justices declared that these officials had every right to demand that the oath be signed.

" 'Their efforts deserve approval, not disapprobation,' the ruling set forth. 'Praise, not execration; eager applause, not muffled drums. Their purpose in exacting the oath is to place about the reliant heart of society renewed confidence in the majesty and power of the American state.' "

It has been said by some of the opponents of this oath or affirmation that freedom is infringed upon. This is no such thing, gentlemen. The only infringement is by some of the members of the university here, members of Cal, and especially the gentleman who was referred to as "Professor X," later known as Dr. Weinberg, who refused at all times to take an oath, and refused before the un-American Committee of the Congress of the United States to state whether he was a communist or not, although he has been prosecuted for atomic spying against his own country.

Dr. Fuchs refused to take an oath of loyalty.

The gentleman by the name of Alger Hiss was convicted, not because he was a traitor to his country, gentlemen, but because he refused to take an oath, because he lied after he took the oath and said he was not a communist and he had not stolen any papers.

That is the purpose of this affirmation resolution, so that we can protect ourselves; so that by following the advice of J. Edgar Hoover we put our own house in order, and we bring about, perhaps, verification of that particular principle that says that America should be the land of the free and should be, under no consideration, dictated or brought into the socialistic or communistic stage.

It has also been said that in certain countries, especially behind the Iron Curtain, particularly Czechoslovakia, that some of those professors were not able to take the oath and those that took the oath to the state later on took the oath to an individual.

We are not asking you to take any oath to any individual. We are asking you to take the oath to the American form of government as prescribed in your Constitution and my Constitution.

The gentleman by the name of Gottwald that was the Vice-Premier, if you want to call it that, of Czechoslovakia, refused to take the oath on the pretext he was a loyal Czechoslovakian, and he said, "I ought not to take the oath. Everybody knows I am a patriot." Then Dr. Benes, the President there, could not fire him because he had not taken the oath. Therefore, he was not a traitor to his country.

Gentlemen, this is no flag-waving. This is not childish patriotism. This comes from the conviction of a man that feels that the greatest boon that can come to any individual on earth is the American citizenship; not like you received it, perhaps, by heritage or happenstance, but one who took the oath of loyalty because he considered this country the greatest country in the world.

As such, I beg of you to pass this oath or affirmation. (Applause.)

DR. J. LAFE LUDWIG (Los Angeles County): Mr. Speaker, members of the House of Delegates: Our United States is a land of great productivity. It is also a land of great salesmanship, to such a degree that individuals from all over the world flock to our shores because we have something in this country; we have the inborn right in this country that they so desire in other countries. They come to this coun-

try of ours: after being here a few years they make their first application for citizenship. Later they receive their final citizenship papers. They appear before a federal judge. A member of their group stands before them, swears them all in as citizens of the United States, and it is a great privilege and pleasure to them.

It is a voluntary thing, something that they ask for, to be given this privilege, to exercise their franchise to vote in this great country of ours.

I wonder if we aren't missing something some place if we don't do a similar thing for our own boys and girls in this country. They go to school every day: you and I did. We stood up in school, we pledged allegiance to the flag. Sort of a little tingle went up our backs because it was something we thought was fine. Our parents told us it was the thing to do. I think maybe it would be a fine example if the members of the California Medical Association would set an example for their children in school by having the intestinal fortitude to stand up and pledge allegiance to this flag of ours. Maybe it would be an example for our children. Maybe it wouldn't. Let's try. (Applause.)

. . . The question was called for. . . .

Dr. Verne Ghormley (Fresno County): It is rather presumptuous of me to try to say anything that has not already been said much better by those who preceded me. I had intended to say something, but I found it had already been said. I should apologize to others here who have more extensive knowledge than I do about these things. Probably I can speak very freely because of the limited amount I know about the subject. It doesn't limit me as much in what I would say.

I may have the wrong slant on this thing, but I do feel that there is something here which is very fundamental, although it is elementary. For the last year or two I have been fortunate—maybe unfortunate—enough to have a little insight into some of our programs for national defense, the plans, the hopes, the preparations, and I think quite a few prayers mixed in with it. I am a little alarmed myself when I see the general apathy. People don't realize what could happen.

Unless 90 per cent of those who are in power are wrong, and I hate to think so many people could be wrong, within the next five years we may be fighting for our very lives, nationally, locally, as groups, isolated groups and others. And when you think of a thing like that you don't kick a proposition like that around very lightly. When you think of it in that light, it seems rather trivial that we should quibble about the wording of a few things.

I admit I am alarmed. I become frightened easily. I spent five years in the service in an infantry outfit, and I assure you I can get frightened mighty fast.

But when you think of furnishing medical service for the military, it is rather a simple thing compared with facing a problem of defense for the children, the women, those who are only partially concerned and those who do not choose to be concerned about a problem like this.

I realize some are disturbed by the memories of possibly some early political promiscuity. Getting a person to admit some things probably is very much like approaching a bridegroom and getting him to admit a confession of some early indiscretions.

I think that is of very little importance. The main thing I think that we should be concerned with is what we ourselves now are willing to do, are willing to sacrifice, willing to give up our little picayunish prides or difficulties we have built up in front of us. I think the problem is greater than just fighting over the wording of the thing. The main thing is, what are we going to do? Are we going to help put this country of ours together as we have and help keep it there? I think that we must grow more mature in our thinking along lines of our pride in our country.

As I said, maybe I have the wrong slant on this thing. I don't feel that the medical profession or the doctors, the deans, the teachers, the lawyers, are being discriminated against in asking them to sign this sort of a document. I am proud of the fact. I am proud of the fact we are doctors, that we are enough of leading citizens in this country that people come to us and say, "We know you are willing to stand behind our country. We know we can depend on you," and having tied that down we can go on and meet these other obligations.

Gentlemen, as I said, I feel very strongly about this thing. I don't know how it is worded, but I do feel we, as a medical profession, owe something to our country in the next five years. I thank you. (Applause.)

Speaker Alesen: Dr. Garland is recognized.

Dr. L. Henry Garland (San Francisco County): Mr. Speaker and members of the House: It is a privilege to be here and to follow on the stand a member of the third generation of a California medical family. You know and I know that Dr. Henry Gibbons III represents a long line of American physicians who have done their duty by their state and by their profession. I only have the privilege of being an adopted son, but I did have the privilege of serving in the United States Navy during the last war for some three and a half years, and I stand ready to serve again if I am called.

I am not sure that you realized what you were doing when you proposed this compulsory political test. I have been a member of the California Medical Association since 1927. I have tried to fight compulsory health insurance for all those years. I hope to try and fight it until I die. I shall always also try to fight compulsory political tests in a scientific organization.

I agree perfectly with Dr. Lafe Ludwig that a declaration of loyalty to the United States, to the State of California, and to the flag is laudable, and perhaps we should start each of our sessions of the House of Delegates with it. However, this oath does

more. This oath specifies that we are not and have not been a member of an organization declared to be subversive by a political appointee in Washington. That, I think, is hazardous when you look back over the political history of any country.

Will this oath keep communists out of our organization? It is to be doubted. Nobody has claimed that it would. Will it set a precedent for more stringent oaths in years to come? Who knows? It has in other countries. It has in other scientific organizations in other countries. It may in ours.

This oath discriminates, I think, against some members who would like to serve you either as employees or as voluntary members of committees or on your Council, and to no good purpose.

Look what happened at the University of California. I grant you perfectly that the situation is not entirely parallel, but on the other hand, it is not remote. The facts are, amongst the university's employees 133 refused to sign—most of them native-born Americans. Amongst members of the academic center, 24. All were fired with the following results. Now, please note the results. These results took two years to eventuate. The results of your action tonight may take two or ten years to eventuate, but note the results at the University of California:

37 other professors quit in protest.

55 courses were dropped from the curriculum.

47 offers of appointment to the university were rejected because of the oath issue.

19 professional societies put the University of California on a black list.

18 of the university professors who had refused to sign the oath filed suit for reinstatement.

It has been said, apparently with justice, that there is no longer a topnotch theoretical physicist at the University of California—not one of the men whose brains are the root of our scientific discoveries.

It seems to me sincerely that this oath is a compulsory political test. We are a voluntary, scientific organization. This oath is foreign to the democratic foundations of the California Medical Association. It may be the beginning of political regimentation in our Association.

We are told that if you reject this oath tonight the communist press tomorrow morning will have headlines saying, "California doctors reject oath." I would like you to know that the free, democratic press will also have headlines, "California doctors do not allow themselves to be stampeded by short-sighted, although well-intentioned, motivists."

. . . Boos. . . .

DR. GARLAND: Well, that is my sincere belief, and I hope, gentlemen, that you reject this amendment. Thank you very much for your consideration. (Applause.)

SPEAKER ALESEN: Dr. Carson has the floor.

DR. DONALD A. CARSON (San Francisco County): Mr. Speaker, fellow delegates: In speaking against this resolution I wish to confine my remarks to the yardstick on which you are judged fit to represent your constituents in the House of Delegates of this Association. Up until this year delegates have been chosen by ballot in most of the counties of the state, and on the basis of that democratic process have represented various county medical societies down here.

Most of the delegates present tonight did not start practicing last year. Most of you look almost as old as I do, and that means that you have been working and practicing in your communities for several years. During that time your colleagues and your county medical societies have had a good opportunity to judge your character, your ability, and as a result of that you have been elected to sit here as delegates. I am sure you are very proud of that. I know I am.

Now, last year we added something to that. It was felt that the judgment of our colleagues still might not detect the black sheep in the organization, that he might conceal his intents and purposes and pass as an honest man among you and deceive you. So, the Loyalty Oath and the affirmation and the insistence that you had not belonged to any organization declared subversive by the Attorney General of the United States was adopted.

I wonder if that is necessary. If I could be convinced that the taking of an oath or the signing of an affirmation would defeat dangerous characters, keep them from sitting in this House and in the Council of our Association, I think I would go along with you.

However, I am not sure that this is the kind of additional check that you really want. I don't think that I do. I talked very badly at this point last year, but I did say then that the Attorney General of the United States is, of necessity, a political officer, and that as such his views may be, and some of them undoubtedly are, influenced by the politics of the moment.

I ask you what might happen if, say, the pressure on the President to remove Mr. Acheson from office as Secretary of State were to take effect? Would Mr. Truman then appoint him as Attorney General? I wonder what might happen to the list of subversive organizations which is currently published. Perhaps a great many of them might go off. What was evil one day might be harmless the next day. It is a matter of political decision, and we have seen one example of the influence of politics upon justice here on the West Coast in the last five years.

You will recall that in 1945 Mr. Harry Bridges was accused of perjury in stating that he had not been a member of the Communist party. He was brought to trial. It seemed that the prosecution in that trial was rather lackadaisical, not pursued with the full vigor that it was in the second trial. The result was that he was acquitted, and after his acquittal you saw the pictures that I did in the newspapers of his being congratulated by people prominent in the New Deal.

At that time Mr. Bridges and his union were in good standing in the CIO, and the CIO was a valu-

able adjunct to the party in power, to the administration.

Now, with the rising tension against Russia and the other factors Mr. Bridges and his union become unwelcome in the CIO. He lost his appointment as an officer of the international and that was reflected in the attitude of the Department of Justice of the United States.

At his second trial a very able prosecutor was sent out here from the East. We probably had just as good here, but they always look better if they come from New York. He prosecuted this case with great vigor. The case proceeded smoothly and Mr. Bridges was convicted.

It is my personal opinion that he had been guilty as charged all along the line, but it took a change in politics to remove the political defense of this man and change it to one for conviction.

This has not increased my faith in this other yardstick of a list of subversive organizations as published by the Attorney General of the United States.

In closing, I would like to say to Dr. de los Reyes we really have complete confidence in his ancestry, and to Dr. Cass I do not think we are children. (Applause.)

. . . The question was called for. . . .

SPEAKER ALESEN: Let Dr. Alsberge speak. Go ahead, Dr. Alsberge.

DR. E. W. ALSBERGE (Los Angeles County): I apologize for not having a prepared speech tonight. I had hoped not to take the floor, but there have been several, I think, misstatements of fact, I am sure through misunderstanding of the problem.

Number one is the statement that communists will not sign the oath. The facts in the case are these: The head of the Communist Party, William Z. Foster, the head of the National Communist Party, the head of the Communist Party in Los Angeles, Dorothy Healy, have both stated, as have many other leading communists, they will not take the oath; they will go to jail first.

The record before the senatorial and House investigating committees, the records before the courts, bear out that case, with the rare exception and peculiar exceptions like Alger Hiss, whose value is so great he couldn't follow the line without destroying the work of sabotage he was committing. The communists have not and they will not take the oath.

Second is the frequent statement that this is a political test. There are two answers to that. In the first place we agree that the Bill of Rights does guarantee us the freedom of speech. The Constitution also sets up very stringent measures to take care of people who try to destroy them.

As for the political test argument directly, this is not a political faith that we are dealing with. It is a foreign conspiracy, a conspiracy whose sworn purpose is to destroy us and the rest of the free world.

Then the statement. "There is no serious danger of communist infiltration in the officers of the Association," I want to dwell on that just a little bit longer, but just before I do, I want to talk about whether or not the Attorney General's list is binding on us. Last year before Reference Committee No. 3, I insisted with all my strength that if escape clauses be put in this oath for the protection of any indivíual, it would be misleading. If there is any question at all, gentlemen, if we don't like the Attorney General or the Attorney General's list, all we have to do is vote en masse by the House of Delegates as far as those organizations are concerned.

Now, specifically as to the danger of infiltration. I know that these statements have been made sincerely because I don't think the danger is recognized. So, if you will bear with me just a moment, I would like to explain superficially, at least, what we, living in the midst of the second largest concentration of communists in the United States, not only feel but have found is a menace not only to our organization here but all American organizations.

It would take me just a few minutes to trace the origin of a lot of this thinking. In so doing, there is no reflection on anyone.

In Los Angeles around a couple of years ago some doctors who are active members of the Civil Rights Congress and the same for the Arts, Sciences, and Professions Council, banded together to form a committee to fight this specific thing. The name of that committee was the Committee for Defense of Professional Licensure. It had amongst its sponsoring members that notorious joiner of communist front, a man known to you all as Dr. Murray Albowitz. It had also as a sponsor Dr. Thomas Addis. I don't believe I need to elucidate on his record to you gentlemen.

It also had as a speaker Dr. Thomas Perry, the first national president of the Association of Interns and Medical Students whom, I believe, you gentlemen have had a difference of opinion with.

This, gentlemen, was not a casual get-together as we have here with a frank difference of opinion, where everybody could speak their mind and be friends. The line was followed visually. The statements were made that the laws in our country, past and contemplated, were more vicious than anything Hitler had ever passed at the height of his power; that there was a conspiratorial agreement between the Senators in the United States Senate and the Nazi underground to force the rebirth of Naziism in Germany and ultimately the re-Nazification of the world.

I shall not go into the line they chanted any longer. There are several members of this House who are officers of the Association and high officers at the time, and I asked them to go with me and observe. They were duly written up anonymously in the *People's Daily World*, and are present tonight if they care to communicate further on this line.

Now, I shall go hurriedly, gentlemen. Subsequently a group from this Committee on Professional Licensure, which was co-chairmanned by Dr. Tracy Putnam, attempted to organize in Los Angeles County. They did not attempt it; they did it. They joined with a large number of good, loyal Americans; as in all of these cases I cited. Many

didn't take the care to look at the document they were signing and sponsoring; not half the care they would take in writing a prescription in their office, but much more is at stake, in spite of the fact that widest publicity was given to this, including meetings, circularization of written material.

The point I want to make is this, gentlemen: They drew 20 per cent of the vote of the Association.

Now, traveling with Dr. Tracy Putnam from the co-chairmanship of this previously mentioned committee of defense of professional licensure, we arrive at the positions against the Burns Bill, the first signature there. He had a number of friends in that group.

Tracing it from that point without wasting any more of your time, gentlemen, we go to a group from that organization joining with a similar group from the lawyers. Now, let's understand it correctly, gentlemen. There are not in those groups a preponderance of communists or communist sympathizers, and anybody who says so doesn't know the first thing about the situation. But I wish to leave it to your judgment, gentlemen, if somewhere along the line there hasn't been a great deal of influence of judgment on this situation, and it is this influencing of judgment by individuals with motives that I not only can question but condemn, that I want to bring out, gentlemen.

We heard an excellent speech from Mr. Bender, Dr. Bender's son, on this floor about the medical schools turning out students who were socialized before they even hit the first day of practice. Is it any wonder, gentlemen, with some of these men I have named on the faculties of our medical schools? Their attempt to come into the Association will be followed by their attempt to come into this House as alternates and delegates. There is no question about it. I fear that.

This oath will do nothing but make it possible to expel them from the House if they wish to pervert this House; no more, no less.

I, too, had military service with the infantry, if that is necessary to qualify here as a speaker. I don't believe it is, but in that infantry service I was impressed with an example that I think is quite analogous, gentlemen.

That is the lone infantry soldier standing then as he stands today in Korea, standing guard at a lonely outpost. Somebody approaches. In essence his challenge, gentlemen, is "Halt, who goes there? Advance to be recognized. Friend or foe?" Gentlemen, is that too much to ask of us on our home front?

I urge, from a deep knowledge of the situation, the passage of this resolution. (Applause.)

. . . The question was called for. . . .

SPEAKER ALESEN: Let's be orderly about this. If you want to stop debate, move the previous question.

A MEMBER: I move the previous question.

. . . The motion was seconded and put to a vote. . . .

SPEAKER ALESEN: The previous question is lost. Dr. Caldwell, proceed to debate.

DR. GEORGE W. CALDWELL: Mr. Speaker, members of the House of Delegates: I promise to take only one minute. You may time me.

I wish to say this first: I think the speakers that have preceded me that are opposed to this oath are honest and sincere in their beliefs, and I believe they are also good citizens. However, I am for this oath. I think we should vote to sign it for several reasons: The eyes of the people of California are upon this House tonight, even of the entire United States. As doctors we are leaders in the State of California in our profession, and we also are respected by the public. Our action here will mean a great deal in the public press if we do not pass this oath.

I would like to correct the one error that I consider was made by one of the previous speakers. He said that in years to come more stringent oaths would be passed. Well, if they are they will be passed by the members of this House, and I think we are all pretty level-headed. I don't believe we are going to pass any political tests. Let us not go home to our families, to our friends, and have to face our patients and say we as a House representing the doctors of California refuse to vote to sign this oath. (Applause.)

SPEAKER ALESEN: Dr. Dwight Wilbur has the floor.

DR. DWIGHT WILBUR: Mr. Speaker, members of the House of Delegates: I have been very much interested in the reaction of doctors and lay peoples throughout the state to this oath, and I think one can readily see such persons fall into three groups.

First, there are those who are rabidly in favor of such an oath. Secondly, there are those who are rabidly against such an oath. Then, there is a third group that can't figure out why anybody makes any fuss about it at all.

I think those of us in this House are divided in that way, and I doubt if anything anybody has said has altered a single opinion in this House because it is on an emotional level.

In order to square my conscience, because I agreed to do so, I would like to say just a few words about it. It is said in our Constitution that the purposes of this Association are to promote the science of art and medicine, the protection of public health, and the betterment of the medical profession; to promote similar interests of its component societies and unite with similar organizations of other states and territories of the United States to form the American Medical Association.

I think before we add to the Constitution any By-Law or in any way amend it, we should think of two things. First, what good it does. Does it serve the purposes for which we have organized this Association? Secondly, does it do any harm?

So far as this particular Loyalty Oath is concerned, I can think of no good that it has done to this organization, nor to any other—certainly to no political organization which has required it.

While there has been some variance of opinion whether communists would or would not take the oath, this is a difference of opinion, and I happen to be one who believes it would make no difference to a communist. He is a liar fundamentally.

Now, will it do harm? All we can do is go on the basis of experience. In this organization it has done harm—as witness debate this evening. It has done harm also to us during this past year, the details of which I don't have time to emphasize tonight.

But we can find a very great lesson from the harm it has done to the University of California. I am sure that in the lifetime of every individual in this room the University of California will never again occupy the position which it did prior to the requirement of the Loyalty Oath.

It has split the 20-odd ablest men in the state who are members of the Board of Regents right in half —exactly in half—and it has caused changes which Dr. Garland has read to you. Those are harmful, and there is reason to believe that harm also will come to our Association, although, of course, not as great harm.

So, personally I am very much opposed to the oath for those reasons.

Finally, we live in a democratic country, and this is a democratic organization. Compulsion has no part in democracy, and this oath is compulsory, and on that ground alone, no matter what the subject of it, it should not be accepted.

Now, I understand the viewpoint of those who feel that this oath should be passed. I also suggest that those of you who feel that way respect the opinions of those of us who feel differently, and if you do, then I do not see how you can ask that such an oath be required. (Applause.)

Dr. Robert Leo Stern: Mr. Speaker, members of the House of Delegates: I speak to you not only as an individual and as a delegate to this House, but I have been asked to speak to you as president of a rather unique organization, the Medical, Dental, Nursing Veterans Association of Los Angeles County. These men have a right to be heard on this subject particularly, not only by the inherent right which we all have as citizens, but by the right of investment which most of you men in this House, I presume, also have: by the right of their investment of years, many years of their professional lives in the service of their country. That is a very basic investment, five years of a man's professional life gives him a strong right to a strong opinion.

The Medical, Dental, Nursing Veterans Association has asked me to ask you to vote favorably. It feels it is fitting and proper that this bill be passed.

Loyalty Oaths are nothing new. They are nothing new to me or to any of you. My grandfather in 1860 took a Loyalty Oath to become a citizen. My father took a Loyalty Oath when he entered the school, when he became an officer of many organizations, and I started taking Loyalty Oaths at the age of six in kindergarten, and took them every day.

Again, as an individual and delegate and president of the Medical, Dental, Nursing Veterans Association of Los Angeles County, I ask a favorable vote on this amendment. (Applause.)

Speaker Alesen: Dr. Askey is recognized.

Dr. E. Vincent Askey (Los Angeles County): Mr. Speaker, ladies and gentlemen of the House: I want to just call one or two points to your attention.

The first is that I am certain that the majority of the members of this House desire no officer, no delegate, no member of our Association to be wrongfully denied a seat in this House, whether he takes the oath or doesn't take the oath. And if I may call your attention to the last sentence in the Oath of Loyalty, it says this: "Any person refused a seat by the action of the Credentials Committee because he doesn't sign the oath shall have the right to appeal to the House, and by a majority vote the House may override the Credentials Committee and seat such person as a delegate."

That means to me, gentlemen, that there are undoubtedly many people who are sitting in the audience today who have been misled. They may have belonged to an organization which they cannot say they did not belong to, but they regret it terribly. They hope and they wish they could sign that oath.

I think everyone here would like to sign it, but some of them fear there will be a stigma attached to them.

Now, we have taken care that such a man as that has only to tell his story to you. You can say, "Joe, you are all right. You made a mistake, but thank God you know what is right."

Now, ladies and gentlemen, it is an important thing, and I deeply regret to see so many of my best friends, Dwight Wilbur, Henry Garland, Henry Gibbons, and the rest of these men who stand as outstanding patriots of my country, the fact that they are misled does not make me think any less of them. I am sorry for them, sincerely. (Applause.)

I am going to say another thing about my friend, Henry Garland. He says that all the University of California did was to get rid of some good physiologists. They also were teaching communism there, as Dr. Chief Bender's boy told you. If we get rid of some teachers that are communists, I don't care whether they are good physiologists or anything else, they have no right to be there.

. . . There were shouts of "Hooray." . . .

The American Medical Association, of which you stand as an integral part, has led against socialism. Why shouldn't we lead in patriotism? They say it is compulsory. It isn't compulsory to sign it as I showed you. If you don't want to sign it, appeal and give us your reasons and we will stand with you if you are right.

I was on the Board of Education of this city for six years. It was my privilege every meeting of that Board to get up and swear allegiance to the flag and loyalty to my country. I did it last week; why not do it today? We know who you are. Because I was proud, too.

Somebody has said that the Attorney General, a political appointee, is the officer that stated these were unpatriotic organizations. If an Attorney General, an admitted political officer, advocates this and calls other organizations subversive, isn't it a welcome change, and indicative that perhaps yet there is hope for the United States and not all of our political officials are misled? (Applause.)

Ladies and gentlemen, I am not going to say much more. You don't need it. I get the sense of this thing that if I have to take the oath every 10 minutes I will take it and be proud of it, and I thank God that there are enough people that believe as I do. (Applause.)

SPEAKER ALESEN: Dr. Kirchner.

DR. ARTHUR A. KIRCHNER (Los Angeles County): Most of you here embrace Christianity. For almost 2,000 years we have reaffirmed our loyalty to the Christ by the participation in communion services of our respective Christian churches, and I am sure if any of you had to swear you would be loyal, you would not hesitate one moment.

Tonight we are asking that you affirm your loyalty to the greatest material thing that you have; that is the State of California and the whole United States. That is all I have to say. (Applause.)

SPEAKER ALESEN: Dr. Ruddock from Los Angeles is recognized.

DR. JOHN C. RUDDOCK (Los Angeles County): Mr. Speaker, members of the House of Delegates: Today we are at war. Although that war is not declared, we are at war. We are fighting for our existence. We are fighting for our way of life. We are fighting to continue this form of government in this nation in the manner in which we are used to and which we like.

Who are are our foes? Our foes are communists and our boys are dying for this one particular principle which we are trying to affirm tonight.

We are merely asking in this resolution or amendment that we affirm that we are not communists or that we belong or have any association with any political party which has been declared as subversive.

Our subversive foes today are our enemies. If this were a declared war and we found any communists, we would intern them. We would put a fence around them and we would isolate them if this war were a declared one.

It is not. It is a war of principle tonight, and some of our boys are dying for it. I think we are quibbling over something which I believe all of us should affirm without any further quibbling.

I am an American citizen, and I am awfully glad of it, and I would take this oath or any other way it might be worded in any shape or form as often as I could take it, and if I ran out of breath I would have somebody else do it for me. But I urge you tonight, gentlemen, to pass this amendment and I would urge that the vote be public and not secret. (Applause.)

A MEMBER: Mr. Chairman, I move the previous question, please.

. . . The motion was seconded. . . .

SPEAKER ALESEN: This is a privileged motion. All those in favor of the previous question signify by saying, "Aye."

. . . The motion was put to a vote. . . .

SPEAKER ALESEN: It is unanimous. Debate stops. We now recur to a vote on the pending question, the adoption of the proposed amendment to the By-Laws. How will you vote?

. . . There were calls of acclamation. . . .

SPEAKER ALESEN: Are you satisfied with a standing vote?

. . . There were calls of yes. . . .

DR. THOMPSON: Mr. Speaker, may I request a secret ballot?

SPEAKER ALESEN: A secret ballot has been requested.

. . . There were calls of no. . . .

SPEAKER ALESEN: To have a secret ballot requires a majority vote. Does someone wish to move for a secret ballot to settle this once and for all?

DR. THOMPSON: I move for a secret ballot.

. . . The motion was seconded. . . .

SPEAKER ALESEN: It has been moved and seconded we ballot secretly. All those in favor signify by saying, "Aye."

. . . The motion was put to a vote and it was lost. . . .

SPEAKER ALESEN: Do you now wish to vote by standing?

. . . There were calls of yes. . . .

SPEAKER ALESEN: All those in favor of the amendment as proposed will signify by standing.

. . . A standing vote was taken. . .

SPEAKER ALESEN: There is no doubt in the mind of the Speaker that the amendment has been adopted by more than a two-thirds majority. We therefore declare it has been adopted.

. . . There were shouts of "Hooray" and applause. . . .

DR. GEORGE I. DAWSON (Napa County): Mr. Speaker, is there some way we can make this unanimous?

SPEAKER ALESEN: No, sir. Dr. Craig, proceed.

DR. LYLE CRAIG: Mr. Speaker and members of the House: I think you may realize now what I meant by saying it aroused considerable discussion in the committee meeting.

Amendment No. 5 was introduced by John W. Green for the Council. This resolution is to amend Chapter VII, Section 2 of the By-Laws as printed on page 44 of the Annual Reports Bulletin.

WHEREAS, It would appear inappropriate that a member of the Council always be a member of a Standing Committee; now, therefore, be it

Resolved, That the word "shall" in line three of the first sentence be changed to "may," and the first

sentence shall thereafter read as follows: "Unless otherwise provided in these By-Laws, each of the Standing Committees (except House of Delegates Reference Committees) may consist of one member of the Council and two other members."

This would probably have been included by the committee in their original changes in the By-Laws, but it was, unfortunately, omitted.

The committee recommends that this amendment do pass.

Mr. Speaker, I move that we proceed to vote upon this amendment.

. . . The motion was seconded. . . .

SPEAKER ALESEN: Is there discussion? All in favor of this amendment signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

SPEAKER ALESEN: It is so ordered. Proceed, Dr. Craig.

DR. LYLE CRAIG: Amendment No. 6 introduced by Dr. Leon Parker of San Francisco, regarding the oath of allegiance to the flag.

The committee feels that the passage of the amendment to the By-Laws requiring a Loyalty Oath makes this amendment somewhat superfluous. We therefore recommend that it do not pass, if it is not withdrawn.

SPEAKER ALESEN: How do you wish to act on this amendment?

DR. LEON PARKER (San Francisco County): Mr. Speaker, I withdraw my motion.

SPEAKER ALESEN: The motion is withdrawn. Proceed, Dr. Craig.

DR. LYLE CRAIG: That concludes the consideration of the proposed amendments to the By-Laws.

The next order of business is the consideration of the committee's report on the resolutions introduced at the session more than 24 hours ago.

Resolution No. 1 was introduced by the representative from Humboldt County, and refers to the payment by California Physicians' Service and insurance carriers for x-ray and laboratory service. Since you have the manuscript in your hands, it will not be necessary to read it.

The committee has changed the final paragraph to read:

Resolved, That the California Medical Association go on record as recommending that all prepaid health insurance companies give equal coverage for x-ray and laboratory services, whether performed in or out of the hospital, in order to eliminate this growing threat for unnecessarily increased hospitalization. We also instruct the office of the California Medical Association to supply to California Physicians' Service, the Blue Cross and all private insurance companies offering either service or indemnity policies in California, a copy of this resolution.

The committee recommends that this amended resolution do pass.

Mr. Speaker, I move the adoption of this section of the report.

. . . The motion was seconded. . . .

SPEAKER ALESEN: Is there any discussion? All those in favor signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

SPEAKER ALESEN: It is so ordered. Proceed, Dr. Craig.

DR. LYLE CRAIG: Resolution No. 2 was introduced by Dr. Justin J. Stein of Los Angeles, and refers to Armed Forces Day on May 19.

The committee has made no change in this resolution and recommends do pass.

Mr. Speaker, I move the adoption of this section of the report.

. . . The motion was seconded. . . .

SPEAKER ALESEN: Is there any discussion? All those in favor signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

SPEAKER ALESEN: It is adopted.

DR. LYLE CRAIG: Resolution No. 3 was presented by Dr. Ralph Teall of Sacramento County, and is printed on page three. It refers to the violation of the medical Code of Ethics by the salaried employment of certain types of physicians by hospitals.

The committee has changed the final paragraph to read:

"*Resolved*, By the California Medical Association that each component society be advised to reexamine the practices of its own members in this regard by assigning this important problem to a committee for study and action, so that appropriate measures may be taken to eliminate any violation of this ethical principle."

We recommend that this amended resolution do pass.

Mr. Speaker, I move the adoption of this section of the report.

. . . The motion was seconded. . . .

SPEAKER ALESEN: Is there discussion? All those in favor signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

SPEAKER ALESEN: It is so ordered.

DR. LYLE CRAIG: Resolution No. 4 was introduced by Dr. Donald A. Carson of San Francisco and refers to the new fee schedule of California Physicians' Service.

Inasmuch as the California Physicians' Service has agreed to withdraw this fee schedule and to continue a committee to formulate a more satisfactory one, it appears to the committee that this resolution is unnecessary. We, therefore, recommend that this resolution do not pass.

Mr. Speaker, I move the adoption of this section of the report.

. . . The motion was seconded. . . .

SPEAKER ALESEN: Favorable action on this motion rejects the resolution. Is there any discussion?

All those in favor signify by saying, "Aye."

. . . The motion was put to a vote. . . .

SPEAKER ALESEN: The motion is adopted. The resolution is rejected.

Proceed, Dr. Craig.

DR. LYLE CRAIG: Resolution No. 5 is also printed on page three and was also introduced by Dr. Donald A. Carson of San Francisco. It refers to instructing the legal counsel to direct an educational campaign on restraint of trade and anti-trust laws.

After considerable discussion with legal counsel, we have decided that this subject is so technical and so many points are controversial, depending on unpredictable legal decisions, that many pitfalls would be encountered in attempting to give to the profession any adequate knowledge of the subject in the time or space which could be allotted to the attempt. Therefore, the committee recommends that the resolution do not pass.

Mr. Speaker, I move the adoption of this section of the report.

. . . The motion was seconded. . . .

SPEAKER ALESEN: Is there discussion? The adoption of the report rejects the resolution. All those in favor signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

SPEAKER ALESEN: The report is adopted.

DR. LYLE CRAIG: Resolution No. 6, introduced by Dr. Donald Carson of San Francisco, is printed on page four of your mimeographed copies, and refers to the results of a questionnaire to doctors on the various matters of C.P.S.

We feel that the purpose of this resolution has been partly achieved by its mere presentation to the delegates and the advisability of instructing the Council to poll the entire membership in a similar manner is very questionable. We have, therefore, changed the last paragraph of the resolution to read:

Resolved, That it be suggested to the Council of the California Medical Association that they take cognizance of the opinions that are expressed by the profession.

Your committee recommends that the amended resolution do pass.

Mr. Speaker, I move the adoption of this section of the report.

. . . The motion was seconded. . . .

SPEAKER ALESEN: Is there any discussion? All those in favor signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

SPEAKER ALESEN: It is so ordered.

Proceed, Dr. Craig.

DR. LYLE CRAIG: Resolution No. 7 was an amendment to the By-Laws which has already been considered under amendments and has been rejected.

Resolution No. 8, printed on page five, was introduced by Albert G. Miller of San Mateo County, and refers to the cost accounting survey of physicians' professional services at a cost not to exceed $250,000.

It is the feeling of the committee that while such a survey might produce evidence of value, yet the experience of the Association has been that such procedures are apt to be inaccurate and the conclusions therefrom so controversial as to render them of such slight value as not to justify them nor their cost.

We, therefore, recommend that this resolution do not pass.

Mr. Speaker, I move the adoption of this section of the report.

. . . The motion was seconded. . . .

SPEAKER ALESEN: Is there any discussion? All those in favor signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

SPEAKER ALESEN: The report is adopted.

DR. STANLEY TRUMAN (Alameda-Contra Costa County): Mr. Speaker, regarding Resolution No. 7, just because the House rejected it as an amendment does not mean they necessarily reject it as a resolution, does it?

DR. LYLE CRAIG: It was presented in the form of a resolution as an amendment, and was referred to us as an amendment.

DR. STANLEY TRUMAN (Alameda-Contra Costa County): I see.

SPEAKER ALESEN: Is that satisfactory?

DR. STANLEY TRUMAN (Alameda-Contra Costa County): Yes. Thank you.

SPEAKER ALESEN: Proceed, Dr. Craig.

DR. LYLE CRAIG: Resolution No. 9 was introduced by G. Wendell Olson of Orange County, and is printed on page five. It refers to the requirement of the Department of Rehabilitation of the State Department of Education for the employment of surgeons licensed by the American Specialty Boards.

In the interest of accuracy the first paragraph has been changed to read the "American Specialty Boards" instead of the "American Board of Surgery." We have further changed the second paragraph to read:

". . . and whereas the Journal of the American Medical Association well expresses the policy of all such boards on pages 149 and 179 of Volume 144, Number Two, September 9, 1950, in the following statement."

The remainder of the resolution is unchanged. The committee recommends that this amended resolution do pass.

Mr. Speaker, I move the adoption of this section of the report.

DR. BURT DAVIS (Santa Clara County): I should like to amend this resolution by adding the words, "and the California State Department of Public Health in its utilization of crippled children's funds." Inserting those words immediately following the words, "California Department of Education," in the second line of the resolution.

SPEAKER ALESEN: Is there a second to this proposed amendment?

. . . The motion was seconded. . . .

SPEAKER ALESEN: Are you clear about this proposed amendment?

. . . There were calls of no. . . .

SPEAKER ALESEN: Read it again, Dr. Davis. Tell them why.

DR. BURT DAVIS (Santa Clara County): The reason I am offering this amendment is that I note in the following amendments referring to the utilization of funds for the Crippled Children's Services that the recommendation of the committee is that one of those resolutions do not pass. And the reason given by the committee which I am anticipating at this point, is that there is no effective method of conveying this information to the department.

Therefore, since the spirit of my resolution has been already expressed in this resolution from Orange County with regard to the same problem, the identical problem, in the instance of rehabilitation, I feel that the same problem occurring in both departments can very well be handled by the same resolution if the resolution is allowed to encompass this wider scope.

Therefore, I should like to see this resolution read,

"*Resolved*, That this Association, through its proper representative, request the Department of Rehabilitation of the California State Department of Education and the California State Department of Public Health in its utilization of Crippled Children's funds to desist from its expressed discriminatory policy and instruct them to obtain a list of qualified surgeons and specialists in related surgical specialties from the local county medical association in that area wherein such rehabilitative and corrective surgery is authorized at the expense of the State of California."

SPEAKER ALESEN: This amendment has been moved and seconded. Is there any discussion? Are you ready to vote on the amendment? All those in favor signify by saying, "Aye."

. . . The motion was put to a vote. . . .

SPEAKER ALESEN: The amendment is adopted.

Do you wish to discuss the resolution as amended? The vote is upon the resolution as amended. All those in favor signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

SPEAKER ALESEN: The resolution as amended is adopted.

Proceed, Dr. Craig.

DR. LYLE CRAIG: Resolution No. 10 was referred to Reference Committee No. 1 and has already been considered.

Resolution No. 11, introduced by Burt Davis of Santa Clara, refers to the objectionable requirement of notarizing narcotic inventories.

I believe that is the only one that has to be notarized now. I discussed this with some of the delegates and I would like to say that they do not seriously object to this but rather they seem to agree with the committee.

While we share with the author of this resolution the irritation of this practice, we feel that we should not further burden the California delegation to the House of Delegates to the American Medical Association, whose time might be more profitably spent on activities of greater scope. The committee therefore recommends that the resolution do not pass.

Mr. Speaker, I move the adoption of this section of the report.

. . . The motion was seconded. . . .

SPEAKER ALESEN: Dr. Davis wishes to speak.

DR. BURT DAVIS (Santa Clara County): I am inclined to agree with the Resolution Committee. However, I would like to make one statement and that is that any time it is within our power to instruct a governmental body to remove some of the red tape that it has foisted upon the rest of us, I am in favor of it.

SPEAKER ALESEN: Dr. Bailey.

DR. WILBUR BAILEY: Mr. Speaker, I think these next two resolutions by Dr. Davis are perfectly delightful; the next one especially about amortizing taxes. I like them.

Now, as to this business of notarizing narcotic inventories, it just shows how, if you let some governmental clerk get ahead of you in Washington, you eventually get used to being insulted and pushed around. It means that 17,000 doctors in the state every year have to go and pay a notary fee because somebody somewhere wrote down that the thing should be notarized. It is a perfect nuisance and inexcusable.

As a member of the Board of Medical Examiners for some years, and I think there are some other members here in the room who will bear me out, I have never seen this do any good yet. We have had a number of doctors for narcotics charges, not keeping proper records, perhaps selling narcotics where they shouldn't, but never has this particular practice come up and been used in evidence; but it is simply a useless irritation, and I hope you instruct our delegates to do everything they can to abolish it. I suspect if somebody telephoned somebody in Washington it wouldn't appear after the next printing.

SPEAKER ALESEN: Is there further discussion? The vote is on the adoption of the report. If you adopt the report you reject the resolution. All those in favor of the report signify by saying, "Aye."

. . . The motion was put to a vote. . . .

SPEAKER ALESEN: You have adopted the resolution.

Proceed, Dr. Craig.

DR. LYLE CRAIG: Resolution No. 12 was introduced by Dr. Burt Davis of Santa Clara. It refers to the amortization of the cost of medical education for tax purposes.

This, too, the committee feels would be a desirable achievement if possible, but the precedents are so well established and the decisions of the Internal Revenue Department so universally against such amortization that the committee feels that the California delegates to the American Medical Association would be given an impossible task, which is not advisable. The committee, therefore, recommends that this resolution do not pass.

Mr. Speaker, I move the adoption of this section of the report.

. . . The motion was seconded. . . .

SPEAKER ALESEN: Is there any discussion? All those in favor of the report, the adoption of which rejects the resolution, signify by saying, "Aye."

. . . The motion was put to a vote. . . .

SPEAKER ALESEN: The resolution is adopted.

DR. LYLE CRAIG: Resolution No. 13 was introduced by Dr. Davis of Santa Clara, and refers to the petitioning for changes in the administrative policy regarding the professional requirements for the treatment of crippled children.

The sense of this resolution has already been incorporated in the previous resolution by action of the House. However, the committee feels that the resolution is defective in that it does not contain sufficient standards by which the lay administrators could be guided in referring such cases. We feel that some standard of clarification is justified and that the matter should be given further study before any action is taken.

The committee therefore recommends that this resolution do not pass.

Mr. Speaker, I move the adoption of this section of the report.

DR. BURT DAVIS (Santa Clara County): Mr. Speaker, in view of the previous action, I would like to withdraw this resolution.

SPEAKER ALESEN: If the House has no objection, Dr. Davis withdraws his resolution. Hearing none, the Speaker allows him to withdraw it.

DR. LYLE CRAIG: Resolution No. 14, introduced by Dr. Burt Davis of Santa Clara, refers to the relatively insignificant federal appropriation under the California Crippled Children's Act.

The committee is in sympathy with the ideas expressed by this resolution and, therefore, recommends that it do pass.

Mr. Speaker, I move the adoption of this section of the report.

. . . The motion was seconded. . . .

SPEAKER ALESEN: Is there any discussion? All those in favor signify by saying, "Aye."

. . . The motion was put to a vote. . . .

SPEAKER ALESEN: It is adopted.

Proceed, Dr. Craig.

DR. LYLE CRAIG: Resolution No. 15, introduced by Dr. Davis, refers to the requirement for compulsory annual contribution by doctors to medical schools.

You are familiar with that one which says that a doctor should prove that he has paid $10 to support a medical school before he can get a receipt for his dues, or something to that effect.

We recognize fully the great need for funds but inasmuch as the American Medical Association is launching an extensive campaign on this same subject, we feel that no action such as that specified in the resolution should be taken at this time.

The committee therefore recommends that this resolution do not pass.

Mr. Speaker, I move the adoption of this section of the report.

. . . The motion was seconded. . . .

SPEAKER ALESEN: Is there any discussion? All those in favor signify by saying, "Aye."

. . . The motion was put to a vote. . . .

SPEAKER ALESEN: The report is adopted.

Proceed, Dr. Craig.

DR. LYLE CRAIG: Resolution No. 16, introduced by Dr. Davis, refers to the establishment of a fund for aid to medical schools.

The committee feels that this provision is to the best interest of both the medical schools and the profession, and recommends that it do pass.

Mr. Speaker, I move the adoption of this section of the report.

. . . The motion was seconded. . . .

SPEAKER ALESEN: Is there any discussion? All those in favor signify by saying, "Aye."

. . . The motion was put to a vote. . . .

SPEAKER ALESEN: It is adopted.

DR. LYLE CRAIG: Resolution No. 17, introduced by Dr. Davis of Santa Clara, refers to the free distribution of CALIFORNIA MEDICINE to students.

For the purpose of clarity, the resolution has been amended as follows:

Resolved, That the House of Delegates of the California Medical Association desires that, if possible, arrangements be made to send a copy of CALIFORNIA MEDICINE to each student registered in the medical schools of the State of California.

The committee feels that there are some problems involved in the effective carrying out of this resolution and that the Council should not be ordered to carry out what might be impossible of accomplishment. However, the goal of the resolution is so desirable that we recommend that the amended resolution do pass.

The original resolution read "to each student in California," which would include everybody from kindergarten on up. That was obviously not the intention of the resolution.

Mr. Speaker, I move the adoption of this section of the report.

. . . The motion was seconded. . . .

SPEAKER ALESEN: Is there any discussion?

DR. BURT DAVIS (Santa Clara County): Is that contrary to what is written here?

DR. LYLE CRAIG: It is contrary to what is written here because it would create an impossible situation.

DR. BURT DAVIS (Santa Clara County): In view of the previous action I request to withdraw this.

SPEAKER ALESEN: Does the House object to Dr. Davis withdrawing this resolution? Hearing no objection, the Speaker declares the resolution withdrawn.

Proceed, Dr. Craig.

DR. LYLE CRAIG: Resolution No. 18, introduced by Dr. Leon Parker of San Francisco, refers to the establishment of a board of approval for voluntary health insurance.

The committee has studied this worthy resolution, even to the extent of attempting to rewrite it in a more compact form achieving its intent. However, after this study our final conclusion is that for the following reasons we feel it unwise:

1. It might place the Association in jeopardy to the extent of potential legal action by organizations not satisfied with our rulings.

2. The insurance carriers are regulated by the Insurance Commissioner of the state, and are required by law to offer free choice of physicians and establish adequate cash reserves.

3. The very considerable expense of setting up the machinery provided for in this resolution is not justified in consideration of the slight benefit derived by the Association.

4. The Council on Medical Service of the American Medical Association already approves or disapproves medical groups offering prepaid health insurance throughout the nation, including California.

Therefore, the committee advises that this resolution do not pass.

Mr. Speaker, I move the adoption of this section of the report.

. . . The motion was seconded. . . .

SPEAKER ALESEN: Is there any discussion? Dr. Parker!

DR. LEON PARKER (San Francisco County): Mr. Speaker, ladies and gentlemen: I don't wish to take great issue with the committee, but they have told us they studied this at length and then did not come to a conclusion that they wish to offer us a substitute resolution. Inasmuch as this deals with this part of our insurance not covered particularly by our own plans, and I believe the portion of that in California is about six million people covered, that is, not under physician plans, and about one million under our plan, this would give us some method of encouraging good insurance to be written.

I would, therefore, offer this substitute resolution:

"*Be It Resolved*, That the House of Delegates of the California Medical Association instruct the Council of the California Medical Association to institute a study into classifying and improving voluntary health insurance."

SPEAKER ALESEN: Is there a second to this proposed amendment?

. . . The motion was seconded. . . .

SPEAKER ALESEN: Is there any discussion on this proposed amendment?

DR. LYLE CRAIG: It is an amendment by substitution, isn't it?

DR. STANLEY TRUMAN (Alameda-Contra Costa County): Is this amendment by substitution? It is out of order at this time.

SPEAKER ALESEN: Elaborate your point, please, Dr. Truman. In what way is it out of order? We are voting on it.

DR. STANLEY TRUMAN (Alameda-Contra Costa County): Is he offering an amendment to this amendment?

SPEAKER ALESEN: He is offering to amend the committee's report by substituting an entirely new proposal.

DR. STANLEY TRUMAN (Alameda-Contra Costa County): He didn't so state.

SPEAKER ALESEN: That is the way the chair interprets it, Dr. Truman. Are you satisfied?

DR. STANLEY TRUMAN (Alameda-Contra Costa County): Yes.

SPEAKER ALESEN: Is there discussion on this proposed amendment? All those in favor signify by saying, "Aye."

. . . The motion was put to a vote. . . .

SPEAKER ALESEN: The amendment is lost.

We now recur to the original amendment of the committee, which recommends that the resolution be rejected. If you adopt the committee's report you reject the resolution. Do you want discussion? All those in favor signify by saying, "Aye."

. . . The motion was put to a vote. . . .

SPEAKER ALESEN: The committee's report is adopted. The resolution is rejected.

Proceed, Dr. Craig.

DR. LYLE CRAIG: Resolution No. 19, introduced by Wilbur Bailey of Los Angeles, refers to the establishment of a state board of psychologists.

This resolution opposes the formation of such a board and the committee recommends that it do pass.

Mr. Speaker, I move the adoption of this section of the report.

. . . The motion was seconded. . . .

SPEAKER ALESEN: Is there any discussion?

DR. WILBUR BAILEY (Los Angeles County): Mr. Speaker, in the interest of conserving time, I didn't discuss a similar resolution last year, which was a mistake because I have had psychologists in my hair ever since. That is a bad thing to have in your hair. I think I would like to tell you how this all came about.

We had some 10 minor changes in the Board of Medical Examiners asking the Legislature for several things. A "doctor" has a sign or an advertisement saying "M.D.," and that is an offense. If he has a card or letterhead saying "M.D." that is all right. So, we fixed that up so that isn't all right either. We also fixed it up so that diagnosis is more

clearly determined. We wanted, of course, to pick up the people who take your blood pressure on the street corner and make a charge and tell you what they think is wrong with you. The chiropractic legal advisor said he didn't object to it much, although some of their chiropractic brothers did follow such practices, but the psychologists were dreadfully excited about it.

Then there was another one increasing the penalties. Maybe you heard of the New Yorker system and maybe you read of Brinkley in the papers. They called him in and fined him $100. He said that didn't hurt because he was making $2,000 a day at the time. We thought maybe we could elevate their sights on the fines to keep up with inflationary practices, and that struck trouble, too, also with the psychologists. We are terribly afraid they will think this aptitude test is dangerous, but after talking to them I think many of them will come to our way of thinking. They are divided into three groups, the ones who have always worked with doctors, who have time to sit down and talk to patients by the hour and do what the doctor of medicine tells them to do, and the second are an academic group that has in the back of its mind the feeling that maybe if we get a licensing board and the Board of Medical Examiners doesn't bother us too much we can get a few more students in our department: and the third group which starts on dianetics and winds up at lower levels.

Now, what we propose to do here is to not only be against forming a State Board of Psychologists, which I think is not very likely to happen this session, but to go further in a positive way and get them registered as the physiotherapists are registered, or I hope they will be by the time the session is over, under the Board of Medical Examiners, so those who have had a real medical education and are trying hard to be ethical, we will have a line on.

By the same token, they want to be registered with the California Medical Association, the ones who are honest and doing the best they can. That is quite an about-face.

I think it was worth speaking to you. I thought you would like to know for your information so when the subject of psychologists comes up next time you won't have any trouble with them.

SPEAKER ALESEN: Is there any further discussion? All those in favor of the committee's report signify by saying, "Aye."

. . . The motion was put to a vote. . . .

SPEAKER ALESEN: The report is adopted.

Dr. Craig!

DR. LYLE CRAIG: Resolution No. 20, introduced by Dr. L. C. Burwell of Los Angeles, refers to the requirement by adoption agencies of specialist care of adopted babies during the probationary period.

Your committee agrees with the resolution and feels that the requirement is unnecessary and undesirable. We have made no change in the resolution and recommend that it do pass.

I might mention we were told of cases in which the family doctor who had taken care of the family for years was refused by the agency the privilege of caring for the adopted baby, although he might be the advisor of the other members of the family, including the children.

Mr. Speaker, I move the adoption of this section of the report.

. . . The motion was seconded. . . .

SPEAKER ALESEN: Is there any discussion? All those in favor signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

SPEAKER ALESEN: It is so ordered.

DR. LYLE CRAIG: Mr. Speaker, I move the adoption of the report of Reference Committee No. 3 as a whole as amended.

. . . The motion was seconded. . . .

SPEAKER ALESEN: All those in favor signify by saying, "Aye."

. . . The motion was put to a vote and it was carried. . . .

SPEAKER ALESEN: It is so ordered.

That is an excellent job, Dr. Craig. (Applause.)

DR. LYLE CRAIG: I should again like to thank the members of the committee, and also express my thanks for the courtesy of those numerous members of the House who appeared before us. We had a good time.

SPEAKER ALESEN: Reference Committee No. 4, Chairman Dr. Sampson. No report.

Mr. Secretary, is there any unfinished business on your desk?

DR. STANLEY KNEESHAW (Santa Clara County): I would like the privilege at this time to introduce a resolution to move that a vote of thanks be given to the Little Giant from the San Joaquin Valley, Frank Doughty, for his excellent work as the head of C.P.S. this year. (Applause.)

SPEAKER ALESEN: That round of applause, Dr. Kneeshaw, indicates, I think, the passage is obvious.

Mr. Secretary, are there any new items of business on your desk?

DR. J. NORMAN O'NEILL (Los Angeles County): Mr. Speaker, members of the House of Delegates: I just want to propose a vote of thanks to Dr. Arthur Smith, who has done a tremendous job, as you probably all know, in formulating the motion picture program. This is something which in the heat of all these discussions might well be forgotten. Dr. Smith has spent seven months of hard work in formulating this very excellent program, which consisted of 92 motion picture films requiring 27 hours of running time.

In addition to that he has made several long-distance telephone calls and sent telegrams and written letters no end. He has received very favorable commendation from both the American College of Surgeons and the American Medical Association, and he has even taken the time to run the films at night, and I believe that is one tremendous contri-

bution to the success of this meeting that should not be overlooked. Thank you. (Applause.)

SPEAKER ALESEN: Dr. Ghormley, will you please escort the new Vice-Speaker, Dr. Randel, to the platform.

Now, Mr. Secretary, will you please proceed with the new business?

SECRETARY DANIELS: Mr. Speaker, there is only one item of new business. That concerns the San Francisco Medical Society having a new charter issued to them since they have changed their name from San Francisco County Medical Society to the San Francisco Medical Society. We request authorization from the House of Delegates for the issuance of the new charter.

SPEAKER ALESEN: Do I hear a second?

. . . The motion was seconded. . . .

SPEAKER ALESEN: Is there any discussion? All those in favor signify by saying, "Aye."

. . . The motion was put to a vote. . . .

SPEAKER ALESEN: The two-thirds majority required by such an action is quite obvious. The motion is passed.

Is there other new business? If not, we will present your President, Dr. Donald Cass.

PRESIDENT DONALD CASS (Los Angeles County): It is with a great deal of pleasure that I introduce to you your new President. This funny-looking fellow and I have been many miles together, Dr. H. Gordon MacLean. (Standing applause.)

PRESIDENT MACLEAN: Mr. Speaker, members of the House: Thank you very, very much.

I now take great pleasure in introducing our President-Elect, Dr. Lewis Alesen. (Standing applause.)

PRESIDENT-ELECT ALESEN: I am not going to make a speech, but some time I would like to take about three hours and go into the biological origin of society with you. I do want to say to you that the happiest times of my life have been spent with a gavel in my hand presiding over the California Medical Association House of Delegates. When I drop this gavel it is with a feeling of nostalgia. I am just being kicked upstairs. I am sorry, but thank you, nevertheless. (Applause.)

PRESIDENT MACLEAN: I now have the pleasure to introduce our new Speaker of the House, Dr. Charnock. (Applause.)

SPEAKER CHARNOCK: I deeply appreciate the support of the House of Delegates, and will do my best to conduct the meetings as expeditiously as has been done by my distinguished predecessors. (Applause.)

PRESIDENT MACLEAN: I now have the pleasure of introducing our new Vice-Speaker, Dr. Randel. (Applause.)

DR. HENRY RANDEL: President MacLean, members of the House: We are deeply grateful. When I say "we" I mean it collectively. We are here to do your bidding from the Oregon border to Ensenada. Thank you very much. (Applause.)

PRESIDENT MACLEAN: I also wish to announce that Dr. Cass, our retiring President, is now the new President of C.P.S. (Applause.)

SPEAKER ALESEN: Now, Dr. Kneeshaw, will you please step forward and perform a duty for which you are well qualified?

DR. STANLEY KNEESHAW: Mr. Speaker, members of the House of Delegates and guests: This is the last official act of a Past President — and a very pleasant one it is indeed.

I would like to eulogize a bit on Don Cass. I know of no man in the California Medical Association who has given more of his time for the good of the medical profession and the people it serves than he has. I have known him for years; have served with him on committees; served on the Council with him: been with him as an A.M.A. delegate, and have watched with envy the way he gets things accomplished.

His broad knowledge of the problems that confront the medical profession is well known to us, and his advice and guidance in their solution has been excellent.

Don, the C.M.A. members will never be able to compensate you for the time you have given and the things you have done for them. The knowledge that you have served us well and that we admire you for it should give you a feeling of gratification. I hope that the fact that you will now be a Past President will not deter you from keeping active in the society.

The C.M.A. now awards you this small plaque as a token of its esteem for you and the honor of having had you as its President. May it give you as much pleasure as it has me as it looks down on you from the walls of your study.

Don, on behalf of the C.M.A. I thank you for your wonderful service to us.

PRESIDENT CASS: Thank you. Although I do want to make a speech, I can't do it.

SPEAKER ALESEN: Mr. Secretary. is there any other item of business on your table?

SECRETARY DANIELS: No, sir.

SPEAKER ALESEN: The editing of the Minutes is ordinarily done by a special committee. The House concurs in that practice, I take it, unless I hear some objection.

Are there any other items of business to come before us? If not, a motion to adjourn is in order.

. . . It was moved, seconded and carried that the meeting be adjourned at 11:30 p.m. . . .

In Memoriam

Beck, Horace R. Died at Bryce Canyon, Utah, June 26, 1951, aged 67, of coronary artery disease. Graduate of the College of Physicians and Surgeons, Los Angeles, 1914. Licensed in California in 1914. Doctor Beck was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

✣

Bennett, Edward C. Died at Ukiah, June 12, 1951, aged 62, of peritonitis. Graduate of the College of Physicians and Surgeons, Baltimore, Maryland, 1912. Licensed in California in 1917. Doctor Bennett was a member of the Mendocino-Lake County Medical Society, the California Medical Association, and the American Medical Association.

✣

Burns, James E. Died at Huntington Park, June 19, 1951, aged 46, of cerebral arteriosclerosis. Graduate of the University of California Medical School, Berkeley-San Francisco, 1933. Licensed in California in 1933. Doctor Burns was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

✣

English, Glenn G. Died at San Fernando, June 11, 1951, aged 63. Graduate of Indiana University School of Medicine, Bloomington-Indianapolis, 1922. Licensed in California in 1924. Doctor English was a member of the Los Angeles County Medical Association, a retired member of the California Medical Association, and a Fellow of the American Medical Association.

✣

Martin, Harry W. Died in Los Angeles, June 25, 1951, aged 61. Graduate of the University of Illinois College of Medicine, Chicago, 1912. Licensed in California in 1920. Doctor Martin was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

✣

Reed, Alfred C. Died in Mill Valley, June 20, 1951, aged 66. Graduate of New York University College of Medicine, New York, 1910. Licensed in California in 1910. Doctor Reed was a member of the San Francisco Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

✣

Wood, Dorothy A. Died in San Mateo, June 8, 1951, aged 57, of coronary artery disease. Graduate of Stanford University School of Medicine, Stanford University-San Francisco, 1919. Licensed in California in 1919. Doctor Wood was a member of the San Mateo County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Questions and Answers about C. P. S.

Question: Recently I sent a C.P.S. patient to the hospital for an x-ray examination because of a suspected stomach ulcer. C.P.S. did not pay for either the hospitalization or the x-ray service. Why were these bills rejected?

Answer: The question obviously refers to a case in which the hospitalization was primarily for laboratory and x-ray procedures which could have been rendered on an ambulatory basis. The member holding a surgical-hospital contract is eligible for diagnostic x-ray and laboratory procedures only when his condition necessitates his confinement as a bona fide registered bed patient. The C.P.S. hospital contract specifically excludes hospitalization that is only for the purpose of diagnostic work-up.

If the physician's opinion regarding the need for hospitalization, in a case such as the one above, is at variance with the position of C.P.S., he should so advise C.P.S. In no sense is C.P.S. trying to question the physician's professional judgment in the handling of a case, but rather is seeking to determine whether the conditions of the patient's contract are being correctly met. As it does not have first-hand knowledge of a case, C.P.S. sometimes has difficulty in judging whether a case is bona fide or not. Therefore, the physician's careful evaluation of each case is highly important.

Of significance with respect to this question is a resolution which was unanimously adopted by the C.P.S. administrative members at the annual convention in 1950. (Resolution No. 5, introduced by Dr. A. B. Carson of Alameda County.)

This resolution specifically called upon C.P.S. to ". . . make every effort, especially by the provisions of its contracts, to encourage the patient and his physician to use hospitals primarily for bed patients, and then only when needed to provide adequate medical care. . . ."

A number of vital considerations motivated the adoption of this resolution. For example: Acceptance of liability by C.P.S. for unwarranted cases tends to develop a situation in which utilization of C.P.S. funds exceeds normal expectations and creates a drain on the health plan's resources which is not justifiable under the rates established. Such a situation, if long continued, will lead to higher dues for members and a resultant lower public confidence in voluntary health care; and for C.P.S. physician members such a situation would materially handicap C.P.S. in its sincere efforts to improve fees for professional services.

The thinking behind this resolution also took into consideration that a large amount of unnecessary hospitalization could easily stimulate further governmental action for the building of hospitals, on the grounds of a scarcity of beds—which actually would be an artificial scarcity, resulting from unnecessary hospitalization. The resolution specifically pointed out that "...such governmentally sponsored hospitals would inevitably come under political control both as to admission and staff appointments."

Question: Are any medical benefits available to C.P.S. members enrolled under the individual family plan?

Answer: Yes. Individual family plan members have the option of subscribing for medical-services-while-hospitalized benefits by paying the additional cost over rates for their standard surgical-hospital coverage. All eligible family members must subscribe for this additional coverage in order for any one of them to obtain it.

Question: What are the classifications of veterans who are eligible to receive out-patient medical care at government expense under the Home Town Care Program?

Answer: There are three such classifications:

1. Veterans with service-connected disabilities are eligible for treatment for specific service-connected disabilities, or for conditions considered by the Veterans Administration to be adjunct to the service-connected disabilities. ("Adjunct" means a non-service-connected disability which is associated with, and held to be, aggravating the service-connected disability.)

2. Veterans in active vocational training under Public Law 16 are eligible for treatment of any conditions which would tend to interrupt their training.

3. Veterans of the Spanish-American War, Boxer Rebellion and Philippine Insurrection are eligible for treatment of any condition after they have applied to the Veterans Administration for treatment and an authorization has been issued for treatment of the specific condition. Both the application and the eligibility must be established separately for each new condition for which these veterans seek treatment.

Question: Under the Veterans Program, why can't I receive blanket authorization for treating a veteran's disability, instead of trying to estimate the amount of services which will be needed?

Answer: The Veterans Administration's funds for treating a veteran must be encumbered at the same time that authorization for treatment is issued. Thus, the amount of funds set aside by VA must depend upon the services for which the physician requests authorization.

NEWS and NOTES

NATIONAL • STATE • COUNTY

ALAMEDA

Dr. Edward S. Rogers, professor of public health and medical administrator on the Berkeley campus of the University of California, recently was appointed a member of the expert advisory panel on health statistics of the World Health Organization.

* * *

The National Foundation for Infantile Paralysis last month awarded $65,070 to the University of California Virus Laboratory to aid research under the direction of Dr. Wendell M. Stanley, professor of biochemistry. At the same time an award of $26,172 was made to the University of California School of Medicine in San Francisco to support work under the direction of Dr. LeRoy C. Abbott, professor of orthopedic surgery.

LOS ANGELES

Plans are being made for an outstanding scientific exhibit in connection with the **Clinical Session of the American Medical Association** to be held in Los Angeles, December 4 to 7. "There will be special exhibits on fractures, overweight, nutrition and health, and noise in industry," it was announced by Dr. George F. Lull of Chicago, secretary and general manager of the A.M.A.

"Main emphasis of the exhibit will be placed on the teaching value for the physician in general practice, but the interests of the specialists will not be overlooked," Dr. Lull said.

* * *

Dr. Erle Henriksen has been appointed clinical professor of gynecology at the University of Southern California School of Medicine.

SAN BERNARDINO

Dr. Virgil M. Pinkley, superintendent of San Bernardino County Hospital for the past 18 years, has announced he will retire from the post September 1. No successor has yet been named.

SAN FRANCISCO

Dr. Edwin Kerr, assistant in surgery in the University of California School of Medicine, San Francisco, has been awarded the $250 Helmut William Fesca Prize for 1951. The prize was established by various donors in memory of Dr. Helmut William Fesca, who was graduated from the School of Medicine in 1943.

* * *

The gold-headed cane, annually awarded to the senior medical student at the University of California School of Medicine who is deemed by fellow students and faculty members to have "the most outstanding qualities of a true physician" and to have shown "the greatest interest in the care of his patients," was presented this year to **Charles J. Carman.** John Lewis Linville and George W. Smith received honorable mention.

The cane award ceremony was inaugurated at the University of California School of Medicine in 1939. Each year the cane is passed from winner to winner.

SOLANO

Dr. Henry G. Mello, who since the first of the year has served as acting director of the Vallejo and Solano County Department of Public Health, has been appointed to permanent status. Dr. Mello took the place of Dr. L. S. McLean, who resigned January 1, 1951, to become chief of local health services, Montana State Department of Public Health.

GENERAL

The seventh annual meeting of the **Western Society of Electroencephalography** will be held in the Olympic Hotel, Seattle, Washington, September 7, 8, 9, 1951.

* * *

The 58th annual convention of the **Association of Military Surgeons of the United States** will be held at the Palmer House in Chicago, October 8 to 10. Advances in military medicine since World War II, and current problems arising out of the critical world situation and the Korean conflict, will be discussed.

* * *

The U. S. Food and Drug Administration is asking the help of physicians in **warning patients against a remedy** being mailed into this country from Mexico, which FDA describes as "worthless and extremely dangerous if employed as a substitute for insulin." If physicians know of diabetic patients who have the preparation, they may communicate the information to FDA, which will contact the patients immediately. It is said to be advertised as Cacalla Composita, Mexican Indian Root, and to be offered by "Mexican Indian Root Co., Mexico City," under the name of Dr. Miguel C. Martinez, general manager.

* * *

The 16th annual meeting of the **Mississippi Valley Medical Society** will be held at Peoria, Illinois, September 19 to 20. The entire program is planned to appeal to general practitioners. No registration fee will be charged. A program of the meeting may be obtained from Harold Swanberg, M.D., secretary, W.C.U. Building, Quincy, Ill.

POSTGRADUATE EDUCATION NOTICES

UNIVERSITY OF CALIFORNIA SCHOOL OF MEDICINE—Medical Extension, San Francisco

Gynecological and Obstetrical Conference:

August 29 through 31, 1951. Room 104, University Extension Building, 540 Powell Street, San Francisco. Fee: $50.00.

Ophthalmology:

September 10 through 15. Medical Center.

Guest Lecturer: Sir Stewart Duke Elder. M.D., Ch.B., F.R.C.S., Director of Research, Institute of Ophthalmology, University of London.

Evening Symposia in Medicine:

Sept. 10 through Nov. 26 (every Monday evening). Medical Center, Parnassus and 3rd avenues.

This is a series of evening exercises for general practitioners in the form of symposia on topics of particular interest to them.

Contact: Stacy R. Mettier, M.D., Medical Extension, University of California Medical Center, San Francisco 22, California.

STANFORD UNIVERSITY SCHOOL OF MEDICINE

Postgraduate Medical Courses for Practicing Physicians:

In cooperation with the San Francisco Department of Public Health and the San Francisco Hospital.

September 10, 11, 12, 13, 14, 1951.

Morning Courses: Monday, Tuesday, Wednesday, Thursday and Friday—8:30 a.m. to 12 noon.

Course 1—General Medicine (San Francisco Hospital—Limited to 20 physicians). Discussion of development, diagnosis, treatment and prognosis of various diseases will stem from cases presenting problems in internal medicine.

Course 2—General Surgery (Stanford Hospital—Limited to 20 physicians). Selected general surgical topics will be reviewed in a series of ward rounds, clinics and lectures. Emphasis will be on the practical aspects of surgical treatment.

Course 3—Urology for the General Practitioner (Stanford Hospital—Limited to 20 physicians). A practical course in the diagnosis and treatment of common urologic conditions. Detailed consideration will be given to office treatment, the use of modern antibiotics, infertility in the male, pyelographic interpretation, and to indications for and types of cystoscopic and operative procedures.

Course 4—Practical Dermatology (Stanford Hospital—Limited to 25 physicians). A practical course designed to emphasize diagnosis and treatment of the common dermatoses. Instruction will consist of numerous case presentations and discussions.

Course 5—Diagnosis and Treatment of Tumors (Stanford Hospital—Limited to 25 physicians). Cancer of the most frequent and accessible sites will be emphasized. Differential diagnosis, standard treatment and recent therapeutic developments will be stressed. The presentations will be didactic with critical discussion in which students will be invited to participate actively.

Course 6—General Surgery (San Francisco Hospital—Limited to 30 physicians). General surgical ward rounds; groups of ten to single instructor.

Course 7—Surgical Anatomy (Stanford Hospital—Limited to 20 physicians). Dissection of special regions and instruction and practice in the technique of various operations will be conducted in the dissecting room.

* * *

Afternoon Courses: Monday, Tuesday, Wednesday, Thursday and Friday—1:30 p.m. to 5:00 p.m.

Course 8—General Medicine (Stanford Hospital—Limited to 15 physicians). Clinical problems as they are affected by advances in fundamental knowledge will be discussed in selected fields. The subjects presented will be: pulmonary physiology and disease, hemorrhagic states, diabetes mellitus, syphilis, nutrition and the vitamins, electrolyte and water metabolism and the clinical use of cortisone and ACTH.

Course 9—Surgical Anatomy (Stanford Hospital—Limited to 20 physicians). Dissection of special regions and instruction and practice in the technique of various operations will be conducted in the dissecting room.

Course 10—Cardiology (San Francisco Hospital—Limited to 25 physicians). Recent advances in clinical cardiology with sections devoted to electrocardiography and newer diagnostic methods and to present day medical and surgical treatment of cardiac disease.

Course 11—Obstetrics and Gynecology (Stanford Hospital—Limited to 25 physicians). Informal discussions and demonstrations concerning amenorrhea, dysmenorrhea, disturbed uterine bleeding, birth trauma lesions, bleeding in pregnancy, therapeutic abortion, breech presentation, use of forceps, endometrial cancer and cytology in relation to incipient malignancy.

Course 12—Psychiatry for General Practitioners (Stanford Hospital—Limited to 25 physicians). A presentation of the principles of psychiatry in general medical practice. Emphasis is on the practical procedures in diagnosis and treatment of commonly encountered disorders, especially in the psychosomatic area. Case presentation and panel discussion.

Course 13—Endocrinology (Stanford Hospital—Limited to 25 physicians). The course will summarize the physiology, the diagnosis and the treatment of disorders of the pituitary gland, the adrenals, the thyroid, and the male and female gonads. The management of diabetes, the metabolic effects of ACTH and cortisone, the parathyroids and bone disease, and the clinical uses of the sex steroids will be discussed. Lectures, case demonstrations and panel discussions.

Course 14—Pediatrics (Stanford Hospital—Limited to 25 physicians). Therapy in Pediatrics: Recent advances in therapy as it applies to infants and children will be discussed.

INFORMATION

Civilian Medical Care for Army Personnel

Generally, medical care and treatment, including hospitalization, are provided for Army personnel in the United States by dispensaries, infirmaries, and hospitals located at the many Army installations throughout the country. There are many locations, however, where Army or other United States federal medical treatment facilities are not available when medical service is required by Army personnel. In cases of this nature, the services of civilian physicians, clinics, and hospitals are necessary. With the expansion of the Army and the development of Army personnel to practically all points in the United States either on a duty, travel, or leave status, the continued cooperation of civilian physicians and agencies is of utmost importance in providing adequate medical service to the United States soldier in time of need.

Certain criteria and procedures have been established in connection with the furnishing of medical service to Army personnel by civilians in accord with the current laws and regulations. These criteria define the conditions under which individuals of the Army may be authorized civilian medical care at the expense of the Army. These procedures include methods for reporting and receiving payment for treatment or hospitalization of Army personnel by civilian medical agencies.

Civilian medical care (other than elective) at the expense of the Army is authorized for commissioned officers, contract surgeons when employed by the Army on a full-time basis, warrant officers, enlisted personnel, cadets of the United States Military Academy, general prisoners and prisoners of war when these personnel are on a duty status or when they are absent from their place of duty on leave or informal leave (pass) status. Applicants for enlistment in the Army and selectees also are authorized necessary civilian medical care at the expense of Army funds while they are being processed for enlistment or induction into the Army. Payment for civilian medical expenses incurred by Army personnel who are absent without leave is not authorized. Any obligations resulting from civilian medical care to Army personnel who are absent without leave are the responsibility of the Army individual concerned.

Normally, civilian medical care for Army personnel is authorized only when there are no other federal medical treatment facilities available. First aid or emergency treatment is authorized at any time, notwithstanding the proximity of Army or other federal medical treatment facilities. In this connection, emergency medical care may be defined as that required to save life or limb or prevent great suffering. Surgical operations should not be performed without prior approval of military authorities, unless indicated as an emergency procedure. Elective medical treatment in civilian medical treatment facilities or by civilian physicians will not be authorized, as Army funds cannot be used for payment of these services.

Due to limitation of funds available to the Army, medical care of dependents of military personnel from civilian sources, at Army expense, is not authorized. Dependents of military personnel may obtain available medical care at Department of Defense medical facilities only. Any obligations resulting from civilian medical care to dependents of military personnel are the responsibility of the dependents concerned or their sponsors.

As a general rule, the local military commander will furnish the civilian medical agency with prior written authority for ordinary medical care to Army personnel under his jurisdiction. In such cases, prior arrangements with the civilian medical agency will be made by the individual or by a proper military authority. In cases in which treatment is given in emergency without prior written authorization, the surgeon of the nearest military command should immediately be notified by the civilian medical agency, giving the individual's name, organization, nature of illness or injury and statement of the practicability of transfer of the patient to an Army or other governmental hospital. The civilian agency or physician then will be advised without delay by the appropriate military authorities as to procedures to be followed.

Bills for authorized medical care and treatment of Army personnel should be submitted to the commanding officer of the organization to which the patient belongs, or to the military authority who provided the authorization for the medical service. If the location of these individuals is not readily known, the bill should be sent to the appropriate military authority, in California to the Surgeon, Sixth Army, Presidio of San Francisco, California.

The bill should show the full name, rank, and service number of the patient, the place and inclusive dates of treatment, the diagnosis, and the charges, all itemized separately. The duty status of the patient at the time of illness or injury also should be shown, such as duty, leave, or pass. Payment will be expedited if the following certificate is typed on the bill and signed:

"I certify that the above charges are correct and just; that payment therefor has not been received; that the services were necessary in the care and treatment of the person named above; that the services were rendered as stated; and that the charges do not exceed those customarily charged in this vicinity."

....

Signature of Payee Title or Capacity

BOOK REVIEWS

THE DOCTOR—HIS CAREER, HIS BUSINESS, HIS HUMAN RELATIONS. By Stanley R. Truman, M.D., the William and Wilkins Company, Baltimore, 1951. 151 pages. $3.00.

Dr. Truman has done quite conscientiously what needs to be done every decade, namely: Providing a manual for the young doctor who is starting out on the rough paths of practice. Most of his conclusions would be concurred in by the vast majority of doctors and his recommendations for the guidance of young physicians in practical affairs are full of sound common sense and quite obviously the result of extensive and thoughtful experience. This experience, and his own particular interests, which are largely concerned with the improvement of general practice, do to a certain extent color his conclusions. This is perhaps shown more clearly in the section on group practice, for which, in spite of his effort to be fair, he makes it perfectly clear he has little use.

There is little in the book that would be valuable to the experienced physician unless the experienced physician finds himself in inexplicable difficulties, but for the use for which it was obviously intended, mainly the guidance of the beginner, it is completely adequate.

* * *

TEXTBOOK OF X-RAY DIAGNOSIS—Volume I—Head and Neck. Edited by S. Cochrane Shanks, M.D., F.R.C.P., F.F.R., Director X-Ray Diagnostic Department, University College Hospital, London; and Peter Kerley, M.D., F.R.C.P., F.F.R., D.M.R.E., Director X-Ray Department, Westminster Hospital. Second Edition. 439 illustrations. W. B. Saunders Company, Philadelphia. 1951. 434 pages. $12.00.

This well known "English" textbook is appearing in newly arranged form. The present volume is divided into five sections, as follows: Central Nervous System by Cairns and Jupe, Teeth and Jaws by Worth, Eye by Reid, Accessory Nasal Sinuses by Graham-Hodgson, and Temporal Bone by Graham-Hodgson.

The section on Central Nervous System contains 41 more pages and 34 more illustrations than did the similar section in the first edition. There are four new pages on "pyography," a rather startling name for the introduction of opaque media into brain abscesses. There is a new chapter on cerebral angiography (spelled angeiography). As in the first edition, most of the illustrations are in positive form, and therefore of not as much benefit to the student and average physician as would be a negative form.

The section on Teeth and Jaws is almost identical with the first edition. It is a reasonably brief summary of the radiological diagnosis of conditions involving these structures.

The sections on Nasal Sinuses and Temporal Bone are rewritten, with some new illustrations and some new developments in technique.

The section on the Eye is very similar to the former section, except for the addition of eight pages on foreign body localization.

Volume II—The Chest. Edited by Shanks and Kerley. Second Edition, 605 illustrations, 702 pages, $15.00.

This edition is dedicated to Twining, the distinguished late co-author of this series of textbooks. As the title indicates, it deals with only two systems, leaving out the urogenital system formerly covered in this volume.

There is an increase of about one-third in the number of pages devoted to the cardiovascular and respiratory systems, the illustrations are almost doubled, and several are in color. The bibliography has been increased by some 80-odd names. Kerley has rewritten his section on the cardiovascular system and has revised the section on the respiratory system formerly written by Twining.

There are no major changes in chapters dealing with x-ray diagnosis of lesions of the cardiovascular system. There is fairly considerable rearragement of some of the headings in the respiratory system, and many developments such as the roentgen aspects of sarcoidosis, beryllosis, pulmonary adenomatosis, etc., are added.

The type throughout is large and easy to read. The illustrations are very clear (although many are in positive form). The two volumes are well indexed, and can be recommended to physicians, especially radiologists and those dealing extensively with disorders of the particular organ systems referred to.

* * *

ATLAS OF HUMAN ANATOMY—Volume I and II. By M. W. Woerfeman, M.D., F.R.N.A.Sc., Professor of Anatomy and Embryology and Director of the Department of Anatomy in the University of Amsterdam. The Blakiston Company, Philadelphia, 1950. $10.00 per volume; $18.00 per set.

This is a beautiful two-volume set of uniform, authentic, well-labeled anatomical illustrations all done in excellent tonal variations to clearly depict the points of interest. There is no written material whatsoever, and it is meant as an illustrative sourcebook of anatomical features of the bones, arteries, muscles, blood vessels, nerves, viscera, and central nervous system. In this regard it is an excellent reference book for surgeon and internist alike, and it would be an invaluable companion for dissecting-room work, if one contemplated using it at the student level. The two volumes together cost only $18.00, and it is certainly the most wonderful collection of anatomical drawings now obtainable at that price.

The reviewer would heartily recommend this book for students of anatomy, physicians who desire an accurate ready reference book without being burdened by reading anatomical verbiage to secure the desired information, surgeons, particularly if they would like a ready operating-room volume, and the general practitioner who often is seeking rapidly available anatomical information.

* * *

CHILD PSYCHIATRY IN THE COMMUNITY—A Primer for Teachers, Nurses, and Others Who Care for Children. By Harold A. Greenberg, M.D., Senior Psychiatrist, Institute for Juvenile Research, Chicago, Assistant Professor of Criminology, College of Medicine, University of Illinois; in collaboration with Julian H. Pathman, Ph.D., Chief Psychologist, Downey Veterans Administration Hospital; Helen A. Sutton, R.N., B.A., B.S., and Marjorie M. Browne, B.A., M.A. G. P. Putnam's Sons, New York, 1950. 296 pages. $3.50.

"Child Psychiatry in the Community," by Harold A. Greenberg, M.D., and his collaborators, who are all specialists within their respective disciplines, provides information regarding the clinic team. The evidence presented in this book shows that such integration can be developed in communities and that such teamwork is being utilized at local levels. It may serve as a most valuable guide for workers in this specialized and most important field.

The book is divided into three sections. The first section is about the child—psychogenesis of behavior problems, symptoms, diagnosis, and treatment. The second section is devoted to the clinic team, namely, the psychiatrist, psychologist, and social worker. It is well done and defines each

discipline's function and that such teamwork is the basic working unit of child guidance. The third section is devoted to the integration of the child guidance clinic and the community.

Throughout the entire book, examples are well documented. The appendix contains data on services of the psychiatric department of the Cook County Juvenile Court (Chicago). There is also a three-page glossary and a list of suggested readings.

This book affords a fund of information and is worthwhile reading—not only for the professional, but also for the layman interested in such a service for his community.

* * *

WHEELER AND JACK'S HANDBOOK OF MEDICINE. Revised by Robert Coope, M.D., B.Sc., F.R.C.P., Physician, Liverpool Royal Infirmary; Consulting Physician, King Edward VII Sanatorium, Midhurst; Lecturer in Clinical Medicine, Applied Physiology and Clinical Chemistry, University of Liverpool. Eleventh Edition. The Williams and Wilkins Company, Baltimore. 1950. 648 pages. $5.00.

This handbook is intended primarily for the student clerk on the wards. As the author writes: "When he has a patient suffering from peptic ulcer, or some blood disease, or bronchitis, or some other diseased condition, he can read something about it . . . (as) a preliminary sketching-in of a background to his experience. Later he will need to read much more, either in larger textbooks or in monographs." This summarizes fairly well the use and value of this elementary book.

It is a fairly small text which may be used to help the student get ready for an examination. Because of the differences between English and American medical practice, it has distinctly less value for the American student than for his British cousin. These differences are perhaps nowhere more obvious than in the therapy of infectious diseases: The sulfonamides are still the preferred treatment. The combination of sulfonamide and scarlet fever antitoxin is recommended for scarlet fever (pp. 27-28), while penicillin is not mentioned. Sulfathiazole is the method of choice for erysipelas (p. 30). The newer antibiotics, such as aureomycin and chloramphenicol, are not mentioned at all.

* * *

A TEXTBOOK OF THE PRACTICE OF MEDICINE. By Various Authors. Edited by Frederick W. Price, F.R.S.Ed., M.D., C.M.Ed., F.R.C.P. Lond., Hon. M.D.Belf., Consulting Physician to the Royal Northern Hospital and to the National Hospital for Diseases of the Heart, London. Eighth Edition. Oxford University Press, 1950. 2075 pages. $9.00.

This new edition of Price's "Textbook of the Practice of Medicine" prompts a brief discussion of the differences between British and American textbooks of medicine. It is a book which has been through eight editions and 13 additional impressions in the course of 18 years. It is published by the Oxford University Press. It has a distinguished list of contributors. Yet its value to the American student and practitioner is considerably less than that of any one of several standard North American texts.

One reason is the factor of local color: There is a difference in the incidence and importance of various diseases in the British Isles (and the Commonwealth countries) and the United States. Another reason is the difference found in the patients involved and the way they are treated in the two countries. Then there is the nomenclature used, especially in therapy. The variances are often formidable enough to suggest a dictionary for proper translation between British and American terms. And of major importance is the reluctance of many British authors to detail newer methods of therapy (especially when those methods are developed in foreign countries).

Price's Textbook, a good, conventional British textbook of medicine, last revised in 1950, typifies all of these differences. To illustrate: New articles have been written on the antibiotics and sulfonamides. Penicillin is regarded as a drug which must be given intramuscularly at intervals of four hours or less. The suspension of penicillin in oil and beeswax is mentioned briefly. Procaine penicillin in aqueous suspension is apparently unknown. Two and a half lines mention that streptomycin "is still in the experimental stage" in the treatment of pulmonary tuberculosis (p. 1271), whereas nascent iodine is given five lines. Aureomycin and chloramphenicol are not mentioned. On the other hand, sulfonamides are still in high favor and are discussed as the treatment of choice in many disease conditions for which they are now considered obsolete in the United States literature.

Part of the therapeutic maladjustment results from the fact that the publication date in the U.S.A. was February 1951 while the editor (judging from the date on the preface) had finished with his chores for this edition by October 1949—a deplorable lapse of a year and a half.

As much as we regret it, we can recommend this volume only for the reference shelf of the library, to be used as a book to give the reader an additional slant on a subject he is investigating.

* * *

HANDBOOK OF DIAGNOSIS AND TREATMENT OF VENEREAL DISEASES. By A. E. W. McLachlan, M.B., Ch.B. (Edin.), D.P.H., F.R.S. (Edin.), Consultant in Venereal Diseases, Bristol Clinical Area; Lecturer in Venereal Diseases, University of Bristol; Honorary Consultant in Venereal Diseases, Bristol General Hospital. With 160 illustrations, 20 in color. Fourth Edition. The Williams and Wilkins Company, Baltimore, 1951. 368 pages. $4.50.

This handbook is compiled from the author's lectures and clinics at the University of Bristol. The first edition appeared in 1944 and there have been three revisions largely because of changes in the therapy of venereal disease that have resulted from the introduction of penicillin and the other antibiotics.

About half the book is devoted to syphilis and there is too much emphasis on the trivial phases of the disease, so frequent in textbooks of dermatology. For example, the primary and secondary stages are given twelve times as much space as cardiovascular syphilis and over four times as much as neurosyphilis.

In the treatment of syphilis, penicillin is recommended with caution and it is not advocated as the sole therapeutic agent, but only in conjunction with quite large amounts of arsenic and bismuth. Such treatment has been considered obsolete in this country for a number of years.

Gonorrhea is discussed at considerable length. Penicillin is the treatment of choice, but the recommended doses are larger than those usually used. After treatment, observation is said to be necessary for a period of six months with many clinical and bacteriological examinations and a final "test of cure" involving instrumentation and the application of chemical "provocatives" prior to the last smear or culture. In this country, the failure rate after penicillin therapy is so low that follow-up examinations usually are not made in the absence of clinical symptoms. Several other minor venereal diseases are discussed briefly.

This handbook emphasizes the immediate care of the infectious stages of the venereal diseases. In an apparent desire to be conservative, the author continues to advise the use of outmoded and hazardous forms of therapy that should have been discarded long ago. It is probably of some value from the standpoint of venereal disease control but it is too superficial to be of much use in solving any of the more complex problems that are presented by so many patients with infections in this field.

BRONCHOESOPHAGOLOGY. By Chevalier Jackson, M.D., Sc.D., LL.D., F.A.C.S., Honorary Professor of Bronchoesophagology and Laryngeal Surgery, Temple University; and Chevalier L. Jackson, M.D., M.Sc., F.A.C.S., Professor of Bronchoesophagology and Laryngeal Surgery, Temple University. Illustrated. 366 pages. W. B. Saunders Company, Philadelphia, 1950. $12.50.

This book is represented in a more up-to-date form and with more added material than the former edition by the authors. As usual this represents a classic in medical textbooks. The excellent full-color drawings by one of the authors are reproduced from the older works.

The chapter on anatomy has introduced into it the Jackson-Huber terminology for the pulmonary segments and their bronchi. By the aid of excellent drawings their concept of bronchial anatomy is clearly demonstrated. The main portion of the book is divided into sections on bronchology and esophagology. The subjects of anatomy and physiology are well covered. The techniques of bronchoscopy and esophagoscopy as practiced at the authors' clinic for diagnostic and therapeutic purposes are well delineated. Numerous illustrations, drawings and x-ray reproductions add to the clearness.

The paper, printing and general format are excellent. The only adverse criticism to be offered is the little space devoted to bronchoscopy with optical lens system which has so aided bronchoscopists in the last few years in the practice of their art.

* * *

THE PHYSIOLOGY AND PATHOLOGY OF HEMOSTASIS. By Armand J. Quick, Ph.D., M.D., Professor of Biochemistry, Marquette University School of Medicine. 18 illustrations. Lea & Febiger, Philadelphia, 1951. 188 pages. $4.00.

This interesting volume is designed to give the reader an historical summary and limited background of present-day views and researches upon the subject of the coagulation of the blood. The theories of hemostasis are given in detail in Chapter One. An extensive bibliography accompanies this phase of the volume.

Chapter Two is entitled, "A New Theory of the Coagulation of the Blood and a Unified Concept of Hemostasis," and the author offers his own hypothesis, in which it is held that the coagulation mechanism, particularly the group of reactions leading to the formation of thrombin, plays a vital and coordinated role in hemostasis. Thrombin, in addition to clotting fibrinogen, labilizes platelets, thereby initiating a chain reaction, since the agent liberated by the platelets activates thromboplastinogen. The author believes that the disintegrating platelets supply in addition a vasoconstrictor principle. Through the latter, the coagulation reaction is linked with the vascular factors in hemostasis. In addition to the vasoconstrictor effect of disintegrated platelets, a primary vascular contraction, probably reflex in nature, also contributes to the process of stanching blood. The fibrin clot, it is stated, does not function primarily as a static mechanical plug, but rather as a reservoir of entrapped platelets and an adsorbent of thrombin whereby it localizes thrombi and maintains sustained local hemostasis by a continuous liberation of the vasoconstrictor principle.

The author discusses in detail the classification of hemorrhagic diseases and their diagnosis under five main headings: (a) bleeding diseases due to vascular defects, (b) bleeding diseases due to factors in the blood (hypothromboplastinemias and hypoprothrombinemias), (c) hypofibrinogenemia, (d) platelets deficient in vasoconstrictor principle (hypothetical), and (e) heparinemia. A special chapter is devoted to the treatment of the hemorrhagic diseases and the surgical handling of problems concerning altered coagulability of the blood. The subject of venous thrombosis and a consideration of its mechanism and treatment is a welcomed addition. To this is appended a discussion of the antithrombins and anticoagulants.

The section dealing with laboratory methods is exhaustive and outlines instructions for 21 laboratory tests used and perfected by the author, i.e., coagulation time, bleeding time, platelet count, clot retraction, tourniquet test, thromboplastin preparation and assay, quantitative determination of prothrombin, prothrombin consumption test, assay of thromboplastinogen, assay of thrombin; estimation of fibrinogen, assay of heparin, prothrombin adsorbents, assay of vitamin K and determination of potency of prothrombinopenia-inducing agents, etc.

To those who are interested in the subject of the coagulation of the blood, the volume is recommended as a resume of the author's published works on the subject.

* * *

ALLERGY: FACTS AND FANCIES. By Samuel M. Feinberg, M.D., Associate Professor of Medicine, Chief of Section of Allergy and Director of Allergy Research Laboratory, Northwestern University Medical School. Harper and Brothers, New York, 1951. 173 pages. $2.50.

The publication of another text on allergy for the lay person must be justified on the basis that it is an improvement on the many texts already published. This point is stressed by the author in the preface. That Dr. Feinberg has more than justified the writing of "Allergy: Facts and Fancies" must be evident to anyone familiar with other lay texts on allergy. The reviewer is convinced that the author has made another ten-strike. Anyone familiar with his textbook on "Allergy in Practice" must be impressed with the skill with which he has been able to reduce the complex facts underlying allergic manifestations to simple language.

In this small book he has presented in lucid style the symptoms, causes and methods of treating the common allergic diseases. The author is to be commended for his conservative evaluation of the results achieved by present methods of treatment. This will aid the layman in a better understanding as to what may or may not be expected from allergic treatment. As the author points out, the results are at times so encouraging that a knowledge of this fact will discourage the patient from self-medication.

The newer drugs and hormones, such as the antihistaminic agents and ACTH and cortisone, are evaluated in a simple manner intelligible to the average lay person.

The book may serve also as a simple text to give the general practitioner and the nurse the fundamental facts of our present knowledge of allergic diseases and treatment.

* * *

INDUSTRIAL HEALTH AND MEDICAL PROGRAMS—Statements, Tables and Charts. Selected and compiled by Margaret C. Klem, Margaret F. McKiever, and Walter J. Lear, M.D. Public Health Service Publication No. 15. Federal Security Agency, Public Health Service, Division of Industrial Hygiene, Washington, D. C., September 1950. 397 pages. $1.00—Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.

The field of industrial injury and sickness care has effloresced in recent years into an enormous industrial health program. This expansion is partly due to a desire on the part of physicians and employers to provide more comprehensive care to workers and partly to meet a demand for increased wages in concealed form. In this remarkable reference book is a collection of data and opinions on industrial health and medical care programs selected from 260 books and publications.

The initial three sections provide background information about industry, the working population, the health of the worker, and the historical development of industrial health schemes. The next three sections describe various plant health and medical services, their type, extent, costs and

apparent savings. The two final sections concern other health and medical programs for industrial workers, including partial information on prepayment medical care plans, governmental industrial hygiene services, disability programs and various vocational rehabilitation programs.

The detailed information on national income, the labor force, and the type and size in industrial establishments is of considerable interest. The data are supposedly correct up to the time of publication, September 1950. The summary of the historical development of industrial health and medical care is something which should be of interest to all physicians currently in practice. Such dates as the initiation of the plan to keep hospital beds occupied (Blue Cross), to keep private medicine out of political control (Blue Shield), etc., are duly listed.

The information on types and extent of plant health and medical services is of interest, but like so much documentary information of this type does not and cannot tell the full story. The "planners'" program is often quite different from the actual one. The final section on health programs, disability programs and welfare agency groups clearly foreshadows further extension of government or union labor into medical care plans. Physicians, read and be forewarned. Young physicians, read and plan accordingly.

* * *

THE KIDNEY—Structure and Function in Health and Disease. By Homer W. Smith, A.B., Sc.D., M.S., Professor of Physiology, New York University College of Medicine. Oxford University Press, New York, 1951. 1049 pages. $12.50.

For two decades Homer W. Smith has applied himself to the problem of renal physiology. From the depths of his own knowledge, and with breadth of scholarship which has carried him ably from the healthy lung-fish to ailing man, he has now compiled a monumental classic describing our present understanding of renal function and related topics.

As might be expected from the author of "The Physiology of the Kidney" (1937), this work devotes much of its space to normal physiology. There are detailed accounts of glomerular filtration, tubular reabsorption and excretion, the effects of antidiuretic and of adrenocortical hormones, excretion of sodium and other electrolytes, acid-base equilibria, renal circulation, effects upon the kidney of various hormones, vitamins and diets, renal function in the very young and in the aged, and comparative physiology. Material of this sort occupies about half the book; in it will be found much of interest not only to physiologists but also to clinicians and pharmacologists.

More than 300 pages are then concerned with the kidney in abnormal states; important general headings include proteinuria, disturbances of salt and water balance, disturbed renal function in non-renal diseases, congestive heart failure, essential hypertension, acute renal failure, glomerulonephritis, pyelonephritis, the nephrotic syndrome, and the actions of diuretics. In this section one is pleased to find not only extensive (and very recent) references to the literature, but also Smith's personal views on such controversial subjects as Trueta's shunt, "lower nephron nephrosis," and the role of the kidney in the pathogenesis of congestive failure and hypertension.

There is relatively little discussion of structure and no attempt to illustrate lesions, the author wisely having left this to others who are trained in pathology. The index seems rather brief, yet is adequate when used thoughtfully. There is an extensive bibliography, in which the works of Thomas Addis and his followers are prominent. The physical appearance is attractive. Oddly enough, one feels a sense of reassurance in noting a small number of minor typographical errors. It is almost superfluous to add that the book is recommended most highly.

HANDBOOK OF MEDICAL MANAGEMENT (2nd Edition). By Milton Chatton, A.B., M.D., Instructor in Medicine; Sheldon Margen, A.M., M.D., Clinical Instructor in Medicine; and Henry D. Brainerd, A.B., M.D., Assistant Clinical Professor of Medicine and Pediatrics, all of University of California School of Medicine. University Medical Publishers, Post Office Box 761, Palo Alto. 1951. 508 pages. $3.00.

This highly compressed and intelligently opinionated manual is written primarily from the viewpoint of medical management in hospital and clinic practice. However, it can be heartily recommended for the desk and bag of the practicing physician as well as for the pocket of the student and house officer.

* * *

A FEW BUTTONS MISSING—The Case Book of a Psychiatrist. By James T. Fisher, M.D., and Lowell S. Hawley. J. B. Lippincott Company, Philadelphia, 1951. 282 pages. $3.50.

The cleverness and humor of the title of this book, "A Few Buttons Missing," so aptly describing many of a psychiatrist's patients, extend throughout the whole volume.

It is the story of the professional and personal life of a psychiatrist, 87 years young. Beautifully written, full of wit, humor, human interest and common sense, it should appeal to both laymen and physicians. The author's down-to-earth attitude toward the intricacies of psychiatry is pleasing.

Your reviewer believes you will be delighted with this book.

* * *

PIONEER DOCTOR. By Lewis J. Moorman, M.D., University of Oklahoma Press, Norman, Oklahoma, 1951. 252 pages. $3.75.

This account of the life and experiences of a country doctor, who later became a specialist in a large city, is well written and will be of interest to physicians and laymen.

The first half of the book, dealing with the author's years in general practice, is especially interesting. The second half is less so; for, in dealing with his experiences as a phthisiologist, the author has included much that is too commonplace for physicians and rather uninteresting for laymen. But, all in all, it is quite worthwhile.

* * *

EYE MANIFESTATIONS OF INTERNAL DISEASES (MEDICAL OPHTHALMOLOGY). By I. S. Tassman, M.D., Associate Professor of Ophthalmology, Graduate School of Medicine, University of Pennsylvania, Philadelphia; Attending Surgeon, Wills Eye Hospital, Philadelphia, Pa. Third Edition. 279 illustrations, including 25 in color. The C. V. Mosby Company, St. Louis, 1951. 672 pages. $12.00.

The second edition of this text of medical ophthalmology was reviewed in CALIFORNIA MEDICINE (p. 105, Feb. 1947). The third edition has added 60 pages; it contains a revision of the subject of glaucoma and additions on a variety of other subjects. It retains, however, most of the defects pointed out in the earlier review (one exception: it is rewarding to note that the discussions on treatment now acknowledge the existence of penicillin). It still fails to achieve its avowed and worthy purpose of integrating ophthalmology into internal medicine.

The book has its principal use for the student of ophthalmology. As far as the internist is concerned, it is a "reference in reverse," to which he can turn only rarely. An example of its limitations may be found on pages 320 and 321, the section on rheumatoid arthritis: There is a fairly adequate summary of the general and joint aspects of the disease, too elementary to be of use to the internist or the general practitioner, but perhaps informative enough for the purpose of the ophthalmologist. On the other hand, uveitis, which may occur in this disease, is barely mentioned, although discussion of it would be of distinct aid to the internist.

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*Passmare, G. G.: Treatment of Discharges from the Vagina in Private Practice, North Carolina M. J. 11:487 (Sept.) 1950.

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Washington News

Dean Clark Report on Voluntary Health Insurance Released. The long-awaited report on voluntary health insurance plans by Dr. Dean Clark's group has been filed with the Senate. A limited number of copies are available free at Senate Labor and Public Welfare Committee and Senate Document Room; Government Printing Office later may reprint and set a price.

The Health Subcommittee notes that the report is the result of 10 months' work, describes it as an "outstanding contribution to our knowledge" of health insurance, and says that it is "perhaps the most complete and definite compilation . . . available anywhere." The subcommittee emphasizes, however, that findings and recommendation "are not those of the committee or its individual members," but of Dr. Clark's group.

The report contains a summary of findings and recommendations and seven chapters on: (1) Methods of study; sources of information, (2) number of persons having insurance, (3) benefits, (4) insurance costs, (5) medical costs and insurance protection, (6) medical care insurance and the industrial, rural and aged populations, (7) the role of medical care insurance.

Findings: Total health service expenditures in 1949 were 10 to 11 billion dollars; nine to 10 billion for medical care, one billion for public health, research and education. Fifty per cent of the total population insured against part of cost of medical care, made up of 15 per cent with only hospital insurance, 21 per cent with some protection against both hospital and surgical costs, 11 per cent with hospital-surgical and limited-medical care coverage and 3 per cent with comprehensive medical care coverage.

Recommendations: Continued study of problem, with Senate committee staff coordinating the effort; "organizations representing both principal carriers of medical-care insurance and major population groups . . . and governmental agencies" collaborating in collection of information; more money for Labor and Commerce departments to finance collection of more precise information on medical care expenditures; series of field studies directed by Senate committee staff.

Trends of voluntary insurance: Growth rapid, prospects good for further increases among those who can be reached; trend is toward reduction of restrictions in coverage, but room for "substantial further broadening of . . . preventive medicine and health education . . . for providing care in an organized fashion, for creation of facilities and for attracting physicians and others to areas where they are now deficient."

Discussed but left unanswered: What is the purpose of insurance? Who should be insured and to what extent? How far should government go in extending insurance?

Druggists' Spokesman Expects Price-Cutting. The U. S. Supreme Court decision in the Louisiana fair

(Continued on Page 58)

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HORMONE THERAPY PAIN RELIEVER IN LATE BREAST CANCER CASES

(Continuing from Front Advertising Section, Page 46)

by research groups under the coordination of the committee. The findings were published in a recent issue of the *Journal of the American Medical Association.*

The national study of the committee involves the effects of the use of hormones in advanced cancer. The report recommended that surgery be performed where possible or adequate x-ray therapy be administered in cases where the metastases are localized or are in accessible bone or soft tissue.

For most bone or soft tissue lesions in metastatic cancer, irradiation is the treatment of choice, it was pointed out. In the case of lung lesions or widespread bone or soft tissue metastases, hormone therapy was recommended.

Testosterone propionate, a male hormone, was found to be the drug of choice for the treatment of premenopausal women. However, it was pointed out that castration is usually more effective and should be the method of treatment unless there are contraindications.

For women five or more years past menopause, estrogen was recommended for the treatment of soft tissue and lung metastases. Bone lesions, it was found, responded equally well to both drugs but

(Continued on Page 58)

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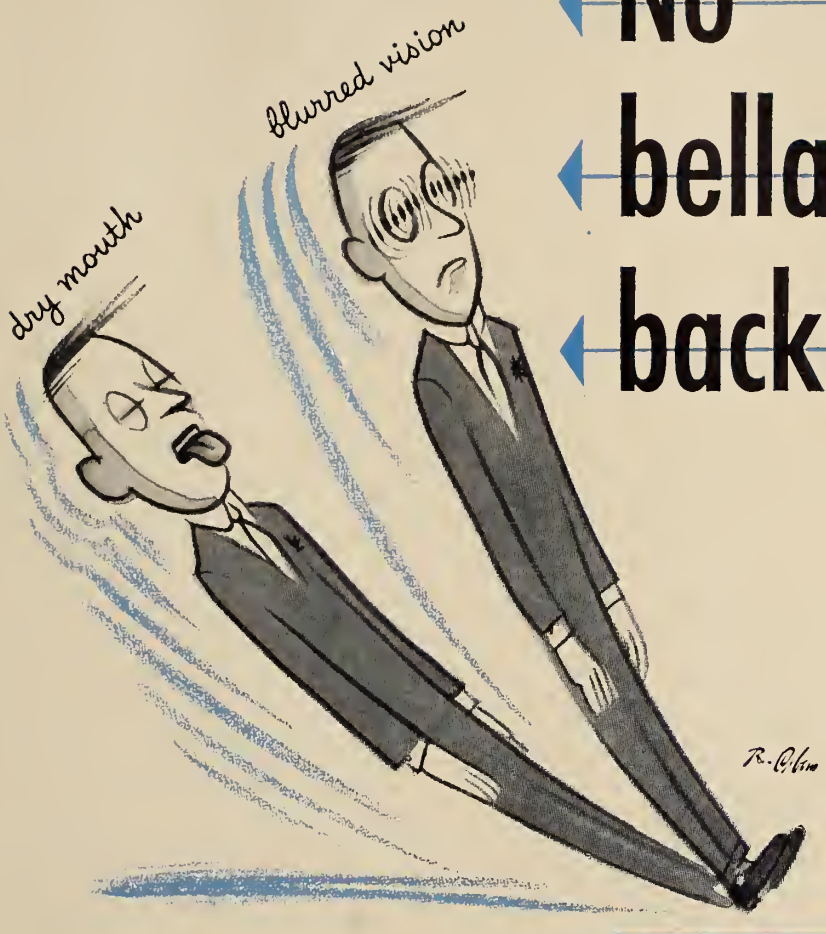

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1. Hock, C.W.: J. Med. Assn. Ga. 40: Jan., 1951
2. Hufford, A.R.: J. Mich. St. Med. Soc. 49:1308, 1950
3. Chamberlin, D.T.: Gastroenterology 17: Feb., 1951

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HORMONE THERAPY PAIN RELIEVER IN LATE BREAST CANCER CASES

(Continued from Page 54)

testosterone showed superiority in controlling subjective symptoms, especially pain.

All of the patients placed on hormone therapy had grown progressively worse under all other forms of treatment or had advanced cases before coming to treatment. The average survival of those placed on estrogen was 9.8 months and on testosterone 8.5 months.

"That steroid therapy may prolong life is demonstrated by the comparison of survival times for improved and unimproved patients," the committee reported. "Patients whose condition was improved by treatment with estrogens lived nearly twice as long as those showing no improvement."

WASHINGTON NEWS

(Continued from Page 50)

trade case probably will precipitate a period of price-cutting in drug products, according to a spokesman for the National Association of Retail Druggists. He said principal items affected would be trade-marked proprietary and other individual preparations.

While the court did not declare the Louisiana law unconstitutional, it ruled that it could not be invoked to bind merchants who refuse to sign no-price-cutting agreements. The effect, the druggist spokesman said, would be to make inoperative similar statutes in 44 other states.

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(Continued on Page 62)

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1. Wetzel, N. C.; Fargo, W. C.; Smith, I. H., and Heliksson, J.: Growth Failure in School Children as Associated with Vitamin B_{12} Deficiency—Response to Oral Therapy, Science *110*:651 (Dec. 16) 1949.
2. Chow, B. F.: Sequelae to the Administration of Vitamin B_{12} in Humans, J. Nutrition *43*:323, Feb. 1951.

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WASHINGTON NEWS

(Continued from Page 58)

the N.A.R.D. worked for passage of the federal Miller-Tydings Act, which recognized the fair trade principle and permitted products covered by the various state laws to move freely in interstate commerce. Under fair trade laws, manufacturers have the option of entering their products into a fair trade agreement, or of allowing individual purchasers to set their own price. However, once a manufacturer makes one agreement within a state, all retailers handling the product must abide by the "fair" price.

PHS Reports on Vaccine Production Test: Theoretically at least, laboratories in U. S. could produce enough vaccine in a short time to meet immunization needs should this country be threatened by a dangerous type of influenza from abroad. This is the conclusion of Public Health Service after a test operation to see how fast vaccine can be produced. Dr. W. Palmer Dearing, acting Surgeon General of PHS, made the formal announcement, explaining he was also speaking for the military Surgeons General, who have participated in a cooperative program on the problem. Preliminary tests show, according to Dr. Dearing, that a single laboratory could, with early isolation of a new strain, produce as many as one million doses of the vaccine within five weeks. Projected into the rest of the industry, this indicates an

(Continued on Page 66)

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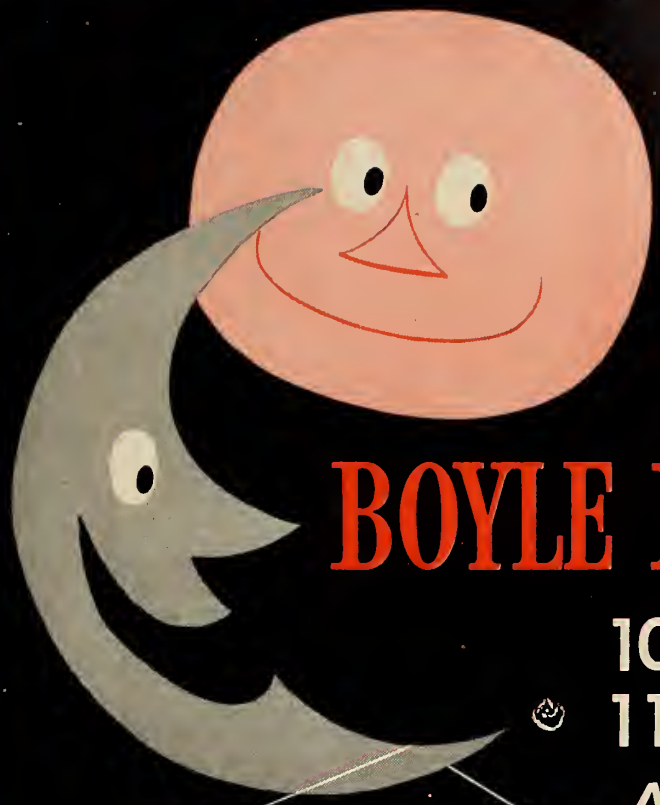

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NIACIN AMIDE	50.0 mg.	150.0 mg.
VITAMIN B_6	0.2 mg.	0.6 mg.
VITAMIN B_{12}	1.67 mcg.	5.0 mcg.
FOLIC ACID	0.17 mg.	0.5 mg.
VITAMIN C	50.0 mg.	150.0 mg.
VITAMIN E	1.0 mg.	3.0 mg.
CALCIUM	225.0 mg.	675.0 mg.
PHOSPHORUS	176.0 mg.	528.0 mg.
IRON (FERROUS GLUCONATE)	15.0 mg.	45.0 mg.
MANGANESE	3.0 mg.	9.0 mg.
NICKEL	0.1 mg.	0.3 mg.
IODINE	0.1 mg.	0.3 mg.
ZINC	1.5 mg.	4.5 mg.
COPPER	0.67 mg.	2.0 mg.
COBALT	0.1 mg.	0.3 mg.
MOLYBDENUM	0.1 mg.	0.3 mg.
MAGNESIUM	10.0 mg.	30.0 mg

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WASHINGTON NEWS

(Continued from Page 62)

output sufficient to check an outbreak of a new epidemic.

Legislative Notes: With Congress busy on appropriations, foreign policy and debate over extension of controls, there is little activity on new medical legislation. However, proponents of the important bills may be expected to press for action as soon as possible. There is no indication of any important shift of sentiment in the Senate for or against S. 337, for federal aid to medical education. It has been passed over for the third time of the unanimous consent calendar. . . . The House Interstate and Foreign Commerce Committee intends to return to consideration of bills for aid to local public health units when it completes more urgent work. The committee already has held two series of public hearings on this, and probably will conclude its discussions at closed sessions. . . . Senator Humphrey's subcommittee report on Veterans Administration's medical department again has been delayed, this time to allow several medical school deans to reply to testimony of Administrator Carl Gray, Jr. . . . The drastically reduced Civil Defense budget finally agreed to by both House and Senate provides $20,000,000 for medical stockpiling on a state-matching basis. CDA's original plan was for regional stockpiles to be financed entirely by federal funds. . . . Senate Preparedness subcommittee has released reports on four more military camps: Fort Dix, N. J.; Fort Knox, Ky.; Parris Island, S. C.; and Camp Roberts, Calif. . . . Final appropriation for International Children's Emergency Fund is $5,750,000; Senate had approved $7,500,000 and House $5,000,000. . . . Senator James Murray (D.-Mont.), chairman of the Labor and Public Welfare Committee, was in Geneva attending the International Labor Conference from June 6 to July 10.

Health: Food and Drug Administration has issued an injunction against 15,000 door-to-door salesmen for Nutrilite, a vitamin and mineral diet. Manufacturer claims the product has value in treating 57 serious diseases and that "diagnosis of disease is not necessary, because whatever the trouble or its medical name, a vitamin and mineral food supplement will cause it to disappear." . . . Polioencephalitis epidemic and 821 cases of poliomyelitis reported in New South Wales, Australia. . . . Dr. Harold P. Morris, National Cancer Institute, given American Goiter Association award for his paper on development of malignant thyroid tumors in mice.

Notes: Proprietary drug industry has agreed to price its products under General Ceiling Price Regulations but recommends a tailored set of regulations to be developed later. The advisory committee emphasized need for a clear definition of drugs in contrast with other chemicals. . . . Army, Navy and Air Force giving one retirement credit to reserves attending military sessions at A.M.A. convention in

(Continued on Page 70)

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WASHINGTON NEWS

(Continued from Page 66)

Atlantic City. . . . VA has listed specific benefits available to veterans of the Korean War including non-service-connected hospitalization and disability pensions awarded under P.L. 28.

Final Action on War Manpower Bills Expected This Week. Senate action is complete and House approval is due this week on war manpower bill. Senate passage of the compromise measure was by voice vote. The bill now provides:

1. Except for a few specialists in scarce categories, volunteer or inactive reservists who served a year or more in World War II must be released after 17 months' active duty; ruling not applicable, however, to National Guardsmen or organized reservists.

2. Five-man National Security Training Commission must submit to Congress (within four months after its activation) broad outline of a Universal Military Training program, which House and Senate Armed Service committees must act on within 45 days of receipt. Training period of six months for 18-year-olds, seven and a half years in reserves; UMT trainees would be paid $30 a month.

3. Physical standards for draftees set no higher than the World War II low level of January 1945; passing score on mental tests lowered from 70 to 65.

(Continued on Page 74)

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Surgical Technic, Surgical Anatomy and Clinical Surgery, Four Weeks, starting September 10, October 8, November 5.
Surgical Anatomy and Clinical Surgery, Two Weeks, starting September 24, October 22, November 19.
Basic Principles in General Surgery, Two Weeks, starting September 10.
Surgery of Colon and Rectum, One Week, starting September 17, October 15.
Esophageal Surgery, One Week, starting October 15.
Thoracic Surgery, One Week, starting October 8.
Gallbladder Surgery, Ten Hours, starting October 22.
Breast and Thyroid Surgery, One Week, starting October 1.
General Surgery, One Week, starting October 1.
Fractures and Traumatic Surgery, Two Weeks, starting October 8.

GYNECOLOGY—Intensive Course, Two Weeks, starting September 24, October 22.
Vaginal Approach to Pelvic Surgery, One Week, starting September 17, November 5.

OBSTETRICS—Intensive Course, Two Weeks, starting September 10, November 5.

MEDICINE—Intensive General Course, Two Weeks, starting October 1.
Gastroenterology, Two Weeks, starting October 15.
Electrocardiography and Heart Disease, Two Weeks, starting October 22.

UROLOGY—Intensive Course, Two Weeks, starting September 24.

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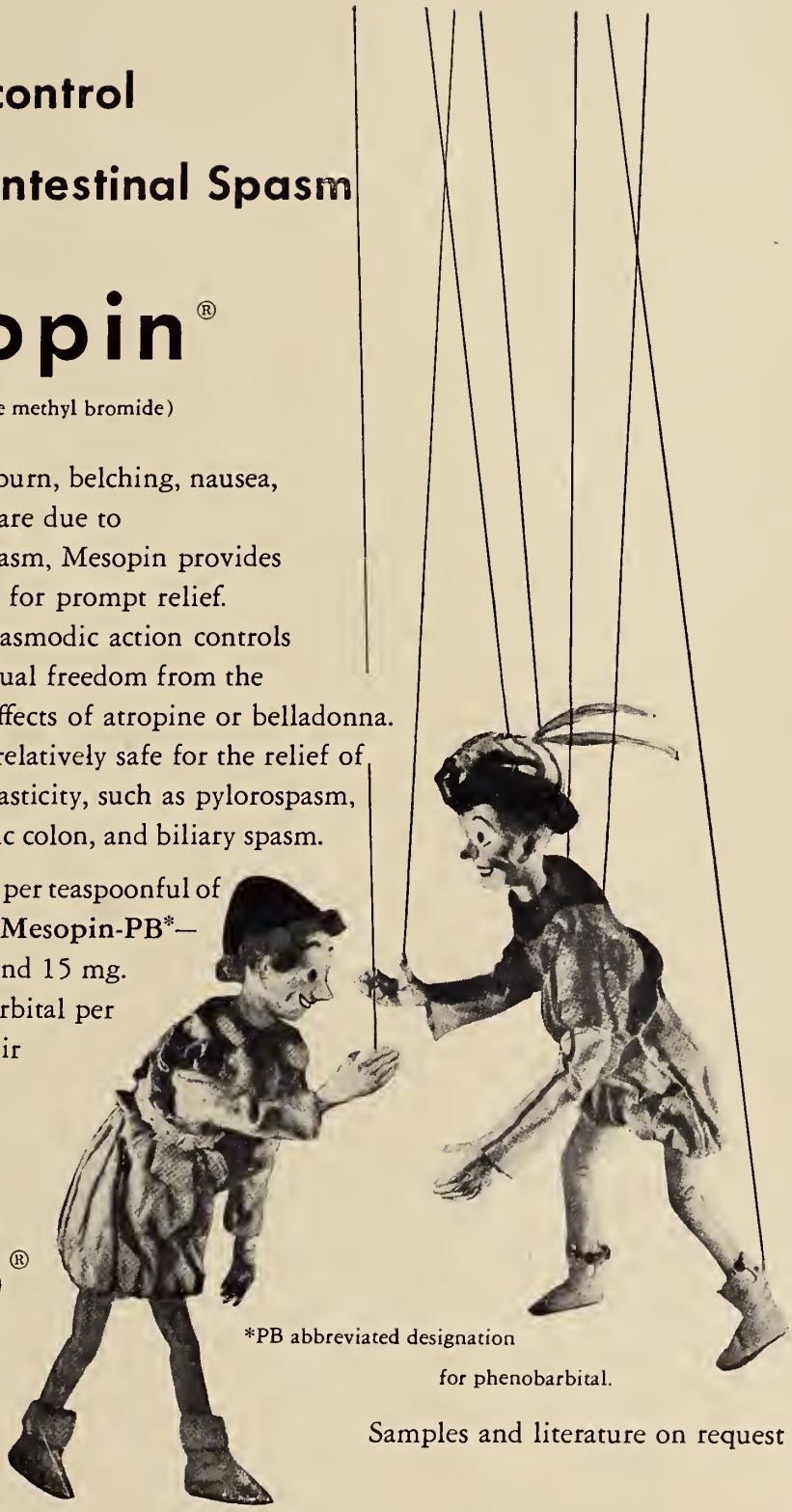

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WASHINGTON NEWS

(Continued from Page 70)

4. Registration of draftees at 18 years; drafting at 18½ years provided local draft boards have exhausted their manpower pool between ages of 19 and 26; active duty of 24 months, plus six years in the reserves.

5. Limit of 5,000,000 on strength of Army, Navy, Air Force and Marine Corps; life of bill extended to July 1, 1955, including the doctor-draft law; present ceiling of 2 per cent of total strength for women suspended until July 31, 1954.

6. Doctor-draft law also extended, with provisions that premedical students be deferred in number equal to current enrollment in such courses; medical student deferment remains responsibility of local draft boards, with latter guided by class standing and national tests; upon graduation, students enroll under doctor-draft, even though they will be listed in general draft.

Missing from the final bill were provisions for annual deferment for three years of 75,000 students and for physical and mental rehabilitation of 4-F's. In Senate debate prior to passage, stress was placed on the fact that national tests, which originated with Selective Service, would not be binding in any way on local boards.

Action Expected Next Few Weeks on Emergency Hospital Construction Bill. Because several major sections of the present housing law expire on June 30, action is expected shortly in the House on the defense housing bill, which would extend those sections. The bill also gives the federal government authority to make grants or loans for construction of hospitals in defense areas, and to operate them if local governments cannot or will not do so. A similar bill already has passed the Senate, which set a $60,000,000 limit on loans and grants for "community facilities," including hospitals. The House previously voted not to take up its own emergency housing bill. The Senate-approved version now is before the House Banking and Currency Committee, but it has no meeting scheduled on this subject.

New Food and Drug Chief Advocates Vigorous Law Enforcement Against "Fakers." Charles W. Crawford, government career man sworn in as Com-

(Continued on Page 78)

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WASHINGTON NEWS

(Continued from Page 74)

missioner of Food and Drug Administration, says the public is being plagued "with a small army of food fakers peddling nutritional nostrums." Mr. Crawford pointed out that operations of "an unscrupulous fringe" imposed a work-load that compels FDA "to deploy our small force into a very thin screen." Accordingly, a "vigorous campaign of spreading the truth as well as of law enforcement is needed." Mr. Crawford received the oath of office in the presence of Federal Security Administrator Oscar R. Ewing and other agency officials, succeeding Dr. Paul R. Dunbar, who retired May 31 after nearly 44 years in government service. The new commissioner began as a government food and drug analyst 34 years ago and since 1944 has been FDA's second ranking officer. He has spent considerable time drafting food and drug regulations and standards and advised in the writing of the present Food, Drug and Cosmetic Act of 1938.

"Chemicals in Foods" Committee Extends Investigation of "Stilbestrol." This week's hearings before the House Select Committee on Chemicals in Foods further investigate possible ill effects to the consumer from eating male poultry that has been given female hormones to fatten and tenderize the fowl. Earlier witnesses had warned of possible dangers to the consumer if the quantities of "Stilbestrol" given the poultry were increased and Chairman James J. Delaney of New York has called four more witnesses this week to give their views. They are: Dr. Robert K. Enders, department of zoology, Swarthmore College; Dr. Carl G. Hartman, director of the division of physiology, Ortho Research Foundation, Raritan, N. J.; S. A. Asdell, professor of animal physiology, N. Y. State College of Agriculture, and Dr. Robert Greenblatt, University of Georgia College of Medicine.

PHS Made "Claimant" for Medical-Hospital Supplies. A directive by Defense Production Administration clarifies the situation regarding control and allocation of medical and hospital supplies. DPA has delegated to Public Health Service's Division of Health Requirements full "claimant" authority in this area. In effect this puts PHS in control of distribution of scarce items for use of doctors, drug stores, hospitals and clinics, other than military and Veterans Administration. PHS planners will not interfere with the usual distribution system when supplies are normal, but will step in to make recommendations on distribution of scarce materials, with DPA exercising ultimate authority. Henceforth, all requests for help in getting scarce items, including construction material, should be addressed to PHS Division of Health Requirements. Until Defense Production Administration made its ruling, two organizations were active in the same field and to some extent competing for inquiries, the Office of Civilian Requirements in National Production Authority as well as the PHS group.

Dr. Cronin Confident Hospitals Can Get Supplies, Personnel. Testifying before the Senate Appropria-

(Continued on Page 86)

These candid photographs of Patient B.H.—snapped unbeknown to her—were taken during an interview in her physician's office. This study of the patient describing her symptoms of mental and emotional distress forms an interesting complement to the case history on the opposite page.

BOOKS RECEIVED

BETTER NURSING—A Study of Nursing Care and Education in Washington. Jean A. Curran, M.D., Dean of the College of Medicine of the State University of New York, and Helen L. Bunge, R.N., Dean of the School of Nursing of Western Reserve University. University of Washington Press, Seattle 5, 1951. 174 pages. $3.00.

CLINICAL UNIPOLAR ELECTROCARDIOGRAPHY. Bernard S. Lipman, A.B., M.D., Assistant in Medicine, Emory University School of Medicine, Atlanta, Georgia, and Edward Massie, A.B., M.D., F.A.C.P., Assistant Professor of Clinical Medicine, Washington University School of Medicine. The Year Book Publishers, Inc., 200 East Illinois St., Chicago, 1951. 232 pages. $5.00.

HOPE AND HELP FOR THE ALCOHOLIC. Harold W. Lovell, M.D., Doubleday & Company, Inc., Garden City, New York, 1951. 215 pages. $2.75.

MANAGEMENT OF CELIAC DISEASE. Sidney Valentine Haas, M.D., Professor of Pediatrics and Director of the Department, New York Polyclinic Medical School and Hospital, and Merrill Patterson Haas, M.D. J. B. Lippincott Company, Philadelphia, 1951. 188 pages. $5.00.

MASTER YOUR MIND. Samuel Kahn, M.D. Rockport Press, Inc., New York, 1951. 262 pages.

METHODS IN MEDICAL RESEARCH — Volume 4. Maurice B. Visscher, M.D., Editor-in-Chief, Professor and Head, Department of Physiology, University of Minnesota Medical School. The Year Book Publishers, Inc., 200 East Illinois Street, Chicago, 1951. 306 pages. $7.00.

PHYSIOLOGY OF THE NEW BORN INFANT, THE (Second Edition). Clement A. Smith, M.D., Associate Professor of Pediatrics, Boston Lying-in Hospital, Harvard Medical School. Charles C. Thomas, Springfield, Illinois, 1951. 348 pages. $7.50.

PRACTICAL CLINICAL PSYCHIATRY (Seventh Edition). Edward A. Strecker, A.M., Sc.D., Litt.D., LL.D., M.D., Professor of Psychiatry, School of Medicine, University of Pennsylvania; Franklin G. Ebaugh, M.D., Professor of Psychiatry, University of Colorado, School of Medicine; Jack R. Ewalt, M.D., Professor of Neuropsychiatry, University of Texas Medical Branch, Galveston.

Section on PSYCHOPATHOLOGIC PROBLEMS OF CHILDHOOD. Leo Kanner, M.D., Associate Professor of Psychiatry, Johns Hopkins University School of Medicine. The Blakiston Company, Philadelphia, 1951. 506 pages. $7.00.

SCOLIOSIS—PATHOLOGY, ETIOLOGY, AND TREATMENT. Samuel Kleinberg, M.D., Attending Orthopedic Surgeon, Hospital for Joint Diseases; Consulting Orthopedic Surgeon, Lebanon Hospital, Maimonides Hospital, Hospital for Special Surgery, New York City; Lecturer in Orthopedics, New York University Medical School. The Williams and Wilkins Company, Baltimore, 1951. 286 pages. $7.50.

SPATIAL VECTOR ELECTROCARDIOGRAPHY—Clinical Electrocardiographic Interpretation. Robert P. Grant, M.D., and E. Harvey Estes, Jr., M.D. The Blakiston Company, Philadelphia, 1951. 149 pages. $4.50.

STUDY OF EPILEPSY IN ITS CLINICAL, SOCIAL AND GENETIC ASPECTS, A. Carl Henry Alström. Acta Psychiatrica et Neurologica, Supplementum 63. Ejnar Munksgaard, Norregade 6—Copenhagen, 1950.

SYLLABUS OF HUMAN NEOPLASMS. R. M. Mulligan, M.D., Professor of Pathology in the University of Colorado School of Medicine. 230 Illustrations. 317 pages. Lea & Febiger, Philadelphia, 1951. $7.50.

TEXTBOOK OF MEDICINE—Eighth Edition. Edited by Russell L. Cecil, M.D., Sc.D., Professor of Clinical Medicine Emeritus, Cornell University, New York; and Robert F. Loeb, M.D., Bard Professor of Medicine, Columbia University, New York. Illustrated. 1627 pages. W. B. Saunders Company, Philadelphia, 1951. $12.00.

THERAPY OF DERMATOLOGIC DISORDERS—Including a Guide to Diagnosis and a Dermatologic Pharmacopeia. Samuel M. Peck, M.D., Dermatologist to the Mount Sinai Hospital, Associate Clinical Professor of Dermatology, Columbia University, and George Klein, M.D., Assistant Clinical Professor of Dermatology, New York Medical College. Lea and Febiger, Philadelphia, 1951. 383 pages. $6.50.

WASHINGTON NEWS

(Continued from Page 78)

tions Committee, Dr. John Cronin said he was confident that construction materials and personnel would be found for new hospitals to be built under the Hill-Burton program. The chief of the Hospital Facilities Division (PHS) said he considered the purpose of the controlled materials plan, going into effect in July, "is to reduce the luxuries, but to provide the essentials. In my opinion the hospitals are essential."

Federal Survey Finds Few Medical Faculty Reductions Planned. Only one-tenth of one per cent of the total faculty reductions planned by colleges for financial reasons in the 1951-52 academic year are in the field of medicine, according to an Office of Education survey. The agency sent out questionnaires to 1,888 schools and received 1,374 returns by late April, at which time the analysis was made. A report in Office of Education's publication *Higher Education* noted that the armed forces were drawing heavily from the college age group and that fear of loss of revenue was causing college officials to consider reducing faculties as one means of balancing budgets. Out of 3,385 planned reductions in faculty reported, only four were in medicine. The highest was for English teachers (15.1 per cent of the total reduction), followed by modern languages (8.1 per cent).

Defense . . . Red Cross Courses . . . Drugs . . . Draft . . . Preparedness. Red Cross will open 12 training centers on college campuses this summer to train instructors for its course, Home Care of the Sick. . . . National Production Authority is satisfied that American drug industry can supply needed products to protect the nation's health. . . . Just a reminder: Deferment test results are not binding on local draft boards; boards have been asked to use scholastic standing and test results in determining draft eligibility but cases are handled individually. . . . Senate Preparedness Subcommittee recommends expansion of medical facilities at three more camps: Camp Breckenridge, Ky.; Fort Riley, Kan.; and Sheppard Air Force Base, Tex.; committee's report on Naval Training Center at San Diego, Calif., made no recommendations for expansion. . . . In announcing the official transfer of Dr. Rusk's Health Resources Advisory Committee to his jurisdiction, Charles E. Wilson, head of Office of Defense Mobilization, said, "This important group has a vital contribution to make to the over-all mobilization effort. . . . mobilization . . . primarily is the welfare of the people as a whole."

In and Out of Government . . . New Organization . . . VA . . . Consultants. National Mid-century Committee for Children and Youth formed with Leonard W. Mayo as chairman. Mr. Mayo is director of the Association for the Aid of Crippled Children. The committee was set up to carry out the objectives of the White House Conference held last December. . . . Fourth World Health Assembly has adopted simplified international sanitary regulations governing vaccination requirements, to go into effect October 1, 1952. President of the Assembly, Surgeon General

(Continued on Page 90)

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CARBOHYDRATE	0.28% average	PHOSPHORUS	128. mil, average	CALCIUM	34.0 mil, average

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WASHINGTON NEWS

(Continued from Page 86)

Leonard A. Scheele, says the regulations require vaccinations for persons leaving areas infected with yellow fever and generally standardizes regulations in all countries. . . . Latest statistics show two-thirds of VA bed space going to non-service connected cases. . . . VA has issued a refutation of June *Readers' Digest* article, "Veterans' Medicine: Back in the Doldrums." . . . Since November of last year 450 special consultants have gone on defense agency rolls—exactly half of them as $1-a-year men and the rest on a consultant fee basis of up to $50 a day when actually working. . . . Army Medical Center has perfected first simultaneous recording of sound and picture (kinephoto recordings) of surgery, for use in medical training.

Pharmacy, Druggist Witnesses Disagree on Prescriptions. Representatives of the National Association of Retail Druggists and American Pharmaceutical Manufacturers' Association are in disagreement on H.R. 3298 (Humphrey-Durham bill) for changing the federal law on prescriptions. Charles Westley Dunn told the House Interstate and Foreign Commerce Committee that the pharmaceutical association would not oppose any legislation designed to improve the situation, but that it was insisting on certain major changes in H.R. 3298. He opposed particularly a proposal in the bill that the federal government maintain a list of drugs which could be dispensed only on order from a physician or other legal practitioner. But Herman S. Waller, counsel for the National Association of Retail Druggists, supported the bill as written. Mr. Dunn and representatives of the Federal Security Agency and Food and Drug Administration advised that the bill be changed to require the written indorsement by a physician after a pharmacist has filled an over-the-phone prescription.

Hospitals Need O.K. If Construction Takes More Than 25 Tons of Steel. A new National Production Authority order requires specific authorization for construction of certain types of buildings, including hospitals, if more than 25 tons of steel are to be used. However, NPA will delegate authority for certifying hospitals to Public Health Service, which already is active in the hospital field through its Division of Hospital Facilities (Hill-Burton) and its Division of Civilian Health Requirements.

Board Proposed to Test New Food Chemicals. House Select Committee on Chemicals in Foods has before it a suggestion for a board to test and certify new chemicals used in food preparation and insecticides. The recommendation came from Dr. Frank Princi of Cincinnati University Medical School, who said "it is extremely doubtful" that testing and research on new insecticides could be resolved "merely by giving additional powers to an already existing bureau." However, Charles E. Palm, Ph.D., professor of entomology at Cornell University, contends "the determination of the necessity of use of pesticides and tolerance of the residues is clearly a function of the Food and Drug Administration." Dr. Princi's proposed board would be comprised of scientists, manufacturers, producers and government. He said the many disagreements among researchers as to the harmful effects of insecticides supported his argument for a board system rather than a plan which would place the burden of proof and total responsibility on one government agency.

Doctor-Draft: Advisory Committee asking local committees to take action in deferment of medical and dental technicians (under the regular draft) in areas where there is shortage. . . . Doctors will be notified at least 30 days in advance of actual orders to report for active duty, Army says. . . . Interns and residents deferred to finish out the year are urged to apply for commissions immediately with the assurance they will not be called until July.

Military Notes: Army extending program for senior psychology students—24 months at a university, one year graduate work at Army hospital and a fourth year completing requirements for Ph.D. . . . Army Surgeon General Bliss reports that American Hospital Association as well as A.M.A. has indorsed program to enlist 3,000 in Army Nurse Corps. . . . Three services working to prevent air and seasickness, physicians checking effects of various drugs on soldiers in rough sea waters.

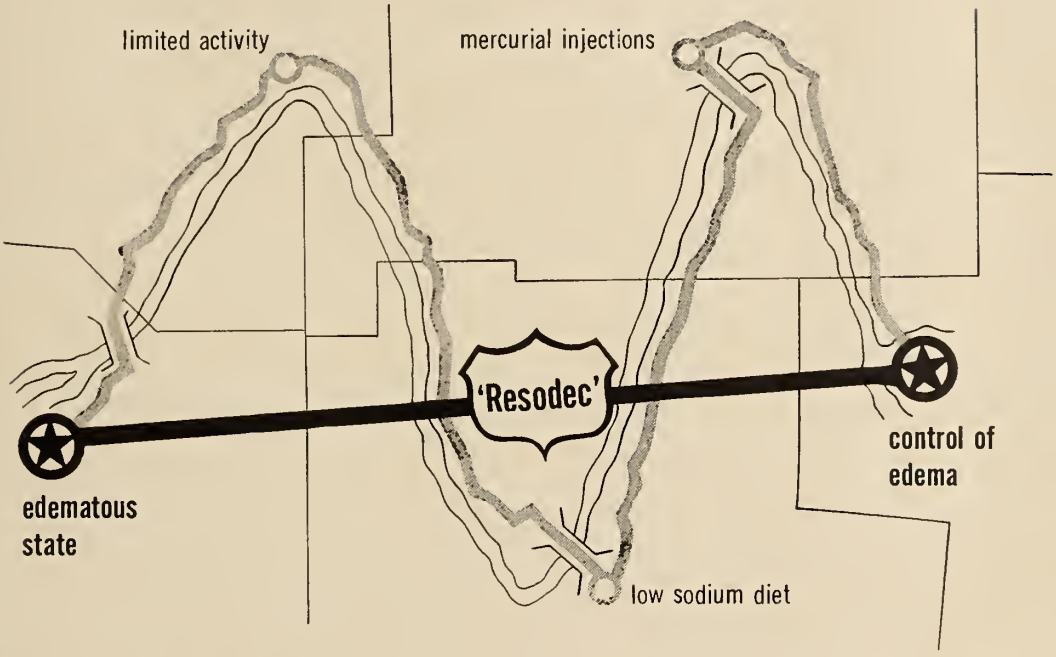
Medical Care Costs Lag Behind General Cost of Living in U. S. Labor Department's Bureau of Labor Statistics reports the cost of medical care rose only 2.3 per cent between last June, prior to Korean war, and December, while living costs were increasing 5.1 per cent. BLS surveys medical care every three months: its March report is not yet available. Other increases: General practitioners' fees, 1.1 per cent; surgeons' and specialists' fees, 1.2 per cent; drugs, 2.5 per cent, and hospital rates, 4.9 per cent. The survey is based on studies in 18 major U. S. cities, and BLS attempts to weight average prices so as to reflect national average.

H.R. 3931 (Medical Academy), identical with a bill (H.R. 9157) of last Congress by the same author, would create a medical training school for the armed services and the Public Health Service to be known as "United States Medical Academy." President to select location of the school upon recommendation of Secretary of Defense and Surgeon General of the Public Health Service.

Public Hearings Concluded on United States Aid to Local Public Health Units. House Interstate and Foreign Commerce Committee will decide shortly what course to take on legislation for establishing and maintaining local public health units. It has concluded open hearings on H.R. 274 and H.R. 913. A bill on the same subject, S. 445, already has passed the Senate.

Joseph S. Lawrence, M.D.,
Director, Washington Office, A.M.A.

A **"short cut"** to control of edema in ambulatory congestive failure cases



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Relationship of Stress to Autonomic Lability

Studies in psychosomatics have shown that functional disorders often are a result of the patient's inability to adjust to emotionally stressful situations (stressor factors).

Nervous tension and chronic anxiety, discharged through a labile Autonomic Nervous System, can cause somatic disturbance. [1,2] Such states may involve any one of the organ systems or several at one time. [1,3] The outline below relates gastrointestinal and cardiovascular symptomatology to the exaggerated response of the autonomic nervous system.

	Physiologic Effects of Autonomic Discharge	
	Sympathetic	Parasympathetic
Gastro-intestinal	Hypomotility Intestinal Atony Hyposecretion Reduced salivation	Hypermotility Gastrointestinal spasm Hypersecretion
Cardio-vascular	Rapid heart rate Peripheral vaso-constriction	Slow heart rate Vasodilatation
Functional Manifestations	Palpitation Tachycardia Elevated B. P. Dry mouth—throat	Heartburn Nausea-vomiting Low B. P. Colonic spasm

Data here tabulated is from references 3,4,5,6,7, given below.

Diagnosis of functional disorder is supported by the following indications of autonomic lability:

Variable Blood Pressure
Body Temperature Variations
Changing pulse rate
Deviations in B. M. R.
Exaggerated Cold Pressure Reflex
Glucose Tolerance Alterations

Therapy in these cases is directed toward: 1) relief of symptoms by drug therapy (so making the patient more amenable to psychotherapy); 2) psychotherapeutic guidance in making adjustment to stressful situations and correction of unhealthy attitudes.

Clinicians who have studied these disorders, including those of the menopause, report that good therapeutic results are produced by combined adrenergic (ergotamine) and cholinergic blockade (Bellafoline) with central sedation (phenobarbital) [8,9,10]. A convenient preparation of this nature is available in the form of **Bellergal Tablets.** Functional disorders are long-term therapeutic problems; therefore, drug treatment by the following method is recommended: 5 or 6 tabs. per day for the 1st week; then gradually reduce to the smallest dose effective in maintaining the patient symptom free (average: 3 tabs. daily). Interrupt for 1 week out of every month to assess results.

1. Ebaugh, F.: Postgrad. Med. *4:* 208, 1948. 2. Wilbur, D.: J.A.M.A. *141:* 1199, 1949. 3. Williams, E. and Carmichael, C.: J. Nat'l. Med. Assoc. *42:* 32, 1950. 4. Goodman, L. and Gilman, A.: The Pharmacological Basis of Therapeutics, The Macmillan Co., 1941. 5. Katz, L. et al: Ann. Int. Med. *27:* 261, 1947. 6. Weiss, E. et al: Am. J. Psychiat. *107:* 264, 1950. 7. Alvarez, W.: Chicago Med. Soc. Bulletin, 581 1950. 8. Rakoff, A.: A Course in Practical Therapeutics, Williams and Wilkins, 1948. 9. Karnosh, L. and Zucker, E.: A Handbook of Psychiatry, C. V. Mosby Co., 1945. 10. Harris, L.: Canad. M.A.J. *58:* 251, 1948.

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EARLY SURGERY URGED AS AID IN RECOVERY FROM POLIOMYELITIS

Early surgery frequently will speed the recovery of poliomyelitis victims, according to Dr. Charles L. Lowman, director of education and rehabilitation and emeritus chief of staff at the Orthopaedic Hospital, Los Angeles.

"Parents naturally wish to avoid surgery, and sometimes it is possible to continue muscle training for a considerable period with a chance of recovery," Dr. Lowman said in a recent issue of the *Journal of the American Medical Association.*

"But, when early surgery is clearly indicated, it in no way jeopardizes outcome. In fact, it frequently wards off deformity and improves the ultimate result."

Patients often are continued on physical therapy one to two years before surgical reconstruction is attempted or recommended, he said. When the signs are clear, repair at any time from the third to fourth month is none too early, he added.

"Such intervention will save the time spent in hospital or convalescent home and the time of all persons involved in the care of the patient," he said. "Cost of hospitalization and physical therapy will be sharply reduced."

Some operations, especially those involving invasion of growing bone, may have to be deferred but certain soft tissue surgery, such as to improve function of the thumb, can safely be done early, he said. Early operation also should be resorted to if indications are clear that deformity is impending, he pointed out.

Dr. Lowman stressed that patients and their families should be given an understanding of the aims and sequence of treatment and the need for the establishment of a streamlined tentative over-all care program. He added:

"If parents have been made to realize that a careful plan of total care has been set up which will save time, work and funds for all concerned, they will accept more willingly desirable changes from one modality of treatment to another and be ready to cooperate when the recommendation for surgery is made."

He suggested that as a matter of economy, parents, public health personnel and volunteer workers take over some home physical therapy treatment of poliomyelitis patients. If weekly or biweekly treatment is given by a physical therapist at a clinic, mildly affected patients usually do well under supervised home care, he said.

Dr. Lowman said that while little can be done to shorten the time of the acute fever phase of the disease, economy can be effected by the release of patients from isolation care at the end of a week or when fever ceases. This is now generally felt to be safe, he said.

"This would permit earlier discharge for outpatient follow-up of the almost 50 per cent of patients who recover without significant weakness or paralysis and permit great reductions in expenditures for hospital care." he pointed out. "Of course, early institution of good care during the isolation period will also do much to hasten recovery."

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1. Shoshkes, M., van Itallie, T. B., Geyer, R. P. and Stare, F. J.: J. Amer. Dietet. A., 27:197 (March) 1951.

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MEDICAL JOURNAL CITES DANGER IN OVERDOSES OF VITAMIN A

Don't give your child more than the prescribed amount of vitamin A on the theory that this will remedy an insufficiency much sooner. Instead, it may cause swelling of bones and soft tissue and bring on distress. This danger was cited in a recent issue of the *Journal of the American Medical Association* by Dr. Irving E. Rineberg of St. Peter's General Hospital, New Brunswick, N. J., and Robert J. Gross of the New York Medical College, New York.

They reported a case involving a 33-month-old girl. The child at the age of two had been put on a dietary vitamin supplement of vitamins A and D because of a diagnosis of mild rickets. The daily dosage was to be five drops of a particular product.

Nine months later, the child had developed a swelling in the left ankle and walked with a limp. A swelling of the wrist also occurred, and the girl experienced pain on moving the wrists. Upon being hospitalized, it was found that the mother, desiring to make up the deficiency of vitamin D quickly, had been giving the child one teaspoonful of the preparation daily for nearly nine months.

The child recovered spontaneously when the vitamin preparation was discontinued. The symptoms returned when administration was resumed and disappeared again when the medication was stopped.

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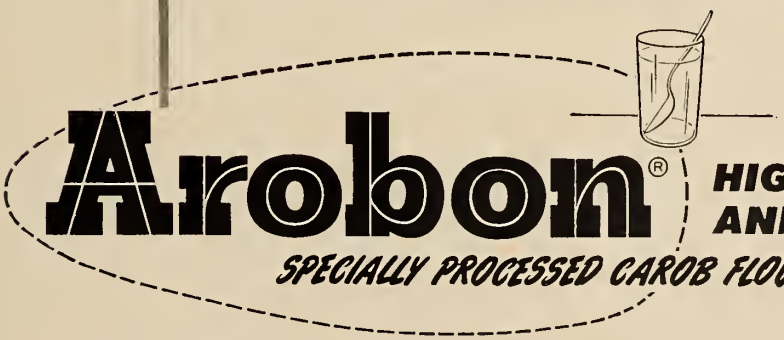

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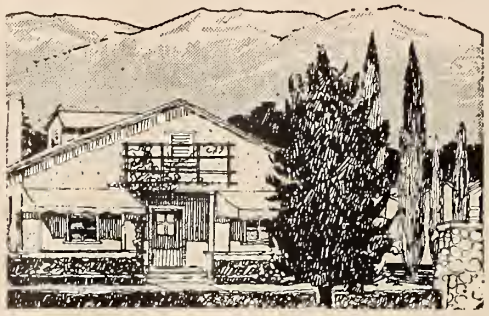

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STUDY SHOWS LONG TRANSPORTATION IS ADDED FACTOR IN POLIO DEATHS

Transportation over long distances may be harmful to a patient in the acute stage of poliomyelitis, a study of the records of a New York hospital indicates.

The results were reported in a recent issue of the *Journal of the American Medical Association* by Dr. M. Bernard Brahdy of Mount Vernon, N. Y., and Dr. Selig H. Katz of New York, both associated with the Willard Parker Hospital in Manhattan.

Of the records of 493 patients studied, 380 covered local patients who traveled an average of seven miles to the hospital. They came largely from Manhattan and surrounding boroughs. There were 113 patients who were transported longer distances, the average being 85 miles. The study covered the poliomyelitis epidemic in summer and fall months of 1949 when many New Yorkers left the city and were hospitalized after being transported long distances.

Among the 380 local patients there were 20 deaths, a case fatality rate of 5.3 per cent. Among the 113 transported patients there were 18 deaths, a rate of 16 per cent. Of the fatalities, one fifth of the local group died within 24 hours after admission to the hospital, whereas one half of the transported fatalities occurred within the same time. The average duration of illness before admission was about the same in both groups—three and a fraction days.

The records also were calculated for those patients who had bulbar or encephalitic involvement. In that group, 19 of the 78 local patients (24.4 per cent) died, whereas 17 of the 37 transported patients (46.0 per cent) died.

To determine whether the more seriously ill patients were selected for transportation at the time the original diagnosis of poliomyelitis was made, information was requested from doctors who saw the patients at the onset of illness. Satisfactory data were obtained from 66 of the transported cases.

Of these, 26 came from an area where there was a small contagious disease hospital. Most of the seriously ill patients (those with bulbar symptoms) and the non-paralytic patients were kept in that hospital. Six came from orphanages and were transferred as soon as the diagnosis was made. The remainder were patients on vacations in small communities where local facilities were inadequate. Physicians sent these patients to hospitals nearest the city of the patient's residence.

"From the information obtained there is no evidence to indicate that the more seriously ill patients were selected for transportation," the doctors concluded.

They added the opinion that "it seems that the greater mortality in the transported group, occurring shortly after admission to the hospital, is a manifestation of the effect of long transportation during the acute stage of illness."

Whether the treatment of patients during the acute stage of poliomyelitis should be decentralized or whether the methods of transportation should be improved requires further study, the report said.

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DR. CLINE TELLS DOCTORS HOW TO KEEP RESPECT OF PUBLIC

Dr. John W. Cline of San Francisco, who recently assumed the office of president of the American Medical Association, recently stated "the general public thinks of the medical profession in terms of service rendered by each practicing physician."

"When one physician violates the Principles of Medical Ethics," Dr. Cline said, "not only does he jeopardize his own position, but that of the entire profession as well. The vast majority of doctors are ethical and take great pride in the quality of the service they render. But there are a few who capitalize on medicine's high professional reputation for their own selfish ends."

Dr. Cline's views were expressed in "The President's Page" of a recent issue of the *Journal of the American Medical Association.*

"It is one of the primary responsibilities of medical associations to uphold the high ethical standards of the profession," he said, adding: "This is one of the main reasons why such organizations must be strong and vigorous. No medical association can ever expect to capture the respect of the people unless it makes a real effort to purge from its ranks

(Continued on Page 33)

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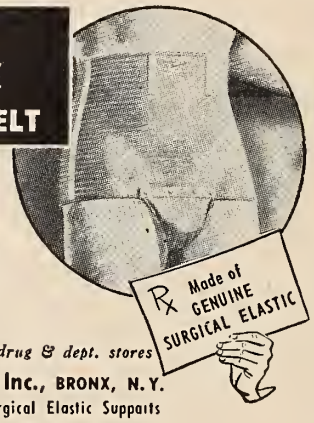

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References:
1 Krantz, Kibler and Bell: "The Neutralization of Gastric Acidity with Basic Aluminum Aminoacetate," J. Pharmacol, and Exper. Therap., 82:247 (1944).
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DR. CLINE TELLS DOCTORS HOW TO KEEP RESPECT OF PUBLIC

(Continued from Page 32)

those who choose to ignore the principles of ethics which govern its members."

Dr. Cline urged A.M.A. members to take a more active part in activities of their county medical societies.

"A strong, courageous society can be a spiritual leader," he said. "It is only through medical organizations that unworthy physicians can be successfully disciplined. Only a medical association can crack down on those who overcharge, who refuse service when called, who put their pocketbook and their personal comfort above duty to their patients.

"Our significant progress has been possible only through the combined efforts of individual physicians working together in their county, state and national medical organizations. We can be proud of the progress we have made in advancing the science of medicine, but we could accomplish even more if every physician in the United States were an active, interested member of his county medical society.

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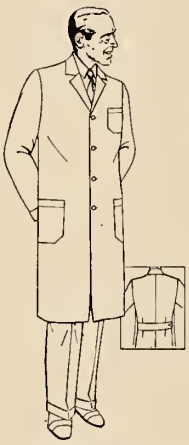

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The Surgical Treatment of Acquired Heart Disease

FRANK GERBODE, M.D., *San Francisco*

SUMMARY

Success in the surgical treatment of certain forms of congenital cardiac malformation has led to a renewed interest in the treatment of acquired heart disease. Similarly, technical advances and a better understanding of cardiac physiology under operative conditions have enabled surgeons to broaden the field and improve the possibilities of cardiac operations.

ACQUIRED heart disease is generally controlled by proper medical management, and in many instances cure can be achieved. There are, however, cardiac conditions, both acute and chronic, which cannot be alleviated by conservative means, and surgical therapy then is indicated.

In cases of cardiac wounds, prompt decision and surgical action to control hemorrhage or relieve tamponade may be necessary. An arteriovenous fistula or aneurysm can increase the work of the heart to the point of causing failure. Contraction of the pericardium by scarring resulting from chronic pericarditis may occasion serious or even fatal interference with the circulation. Valvular disease, long the great challenge in cardiac surgery, is being brought into the operative sphere. It seems reasonable to assume that as the ambit of effective cardiac operation is widened, surgical treatment will give aid in other forms of acquired heart disease for which there is no specific conservative therapy.

From the Department of Surgery, Stanford University School of Medicine, San Francisco.

Chairman's Address: Presented before the Section on General Surgery at the 80th Annual Session of the California Medical Association, Los Angeles, May 13-16, 1951.

INJURY TO THE HEART

Although severe wounds to the heart and adjacent great vessels usually result in death, there are possibilities for applying procedures which may be life-saving. In some cases conservative treatment may be effective. Severe contusion to the heart, when not complicated by pericardial effusion, may be treated by methods used for coronary occlusion.[2] Pericardial aspiration may be used in treating penetrating wounds which cause tamponade[3, 4, 11, 30, 32] — silent heart, increased diameter of the cardiac roentgenologic shadow, increased venous pressure, and decreased arterial pressure. But if there is no clinical improvement despite such measures and the cardiac wound continues to bleed, thoracotomy is indicated. The approach is through the left fourth interspace, with division of the fourth and fifth costal cartilages. When the pericardium is opened, suction is applied to remove the blood while search is made for the wound. Moderate pressure with the index finger will usually control the bleeding while the wound is closed with interrupted silk. A heavy silk suture passed through the apex of the heart may aid in steadying or displacing the heart so that suturing can be done more easily, but it must be remembered that such displacement can cause pronounced circulatory depression.

Metallic foreign bodies within the heart or embedded in the cardiac muscle are usually removed since they frequently cause symptoms.[1-18] They may also be in a position to cause erosion of a great vessel or of the heart wall itself, with consequent sudden fatal hemorrhage. Removal of small foreign bodies which are not adjacent to vital structures usually is not necessary. At times a foreign body that does not in itself cause symptoms may, in passing into the heart, have produced a lesion so disturbing to the function of the organ that the patient

eventually dies. For example, a Marine who recovered from massive hemothorax caused by a gunshot wound of the heart. A month later he had symptoms typical of heart failure. In addition, to the left of the sternum there was a loud continuous "machinery murmur," much like that associated with a large patent ductus, low diastolic pressure and wide disparity between the systolic and diastolic pressure. In spite of all conservative measures and an operation which only demonstrated that surgical aid was not possible, the patient died. At postmortem examination it was observed that the bullet had entered the left atrium and passed into the subaortic portion of the left ventricle, causing a left atriosubaortic fistula and also causing aortic insufficiency from a tear in one aortic cusp. Death was the result of cardiac failure caused by the fistula and the valvular insufficiency.

TUMORS OF THE HEART AND PERICARDIUM

There have been over four hundred cases of primary tumor of the heart and pericardium recorded in the literature.[12, 17, 21, 33] In approximately one hundred of the cases the lesion was primary malignant tumor of the heart, and in most instances the site of origin was the right atrium. Neoplasms originated in the pericardium in fewer than a hundred cases.

Opportunities for surgical removal of cardiac and pericardial tumors have been rare because of the inability to establish the diagnosis before operation was out of the question. The more frequent use of angiocardiography, in conjunction with other diagnostic refinements, may help toward earlier and more precise diagnosis in the future. Meanwhile, safer methods of operating upon the myocardium are being studied in the laboratory.

ARTERIOVENOUS FISTULA

Abnormal communications between arteries and veins may cause cardiac enlargement due to dilation and hypertrophy. This effect upon the heart has been found to be caused by the increase in work required of it to propel the larger blood volume resulting from the fistula; it may lead to myocardial and valvular damage and to cardiac failure.[24, 26] These physiological responses to the fistula are dependent upon the size of the communication and its location in the vascular system; generally speaking, the larger the fistula the greater the effect upon the heart. Although these circulatory disturbances are commonly associated with acquired fistulae, they may occur in the congenital forms if the communications are large or numerous.[13-29]

The diagnosis of an arteriovenous fistula can be made by the presence of a continuous "machinery murmur" heard best over the communication and along the veins leaving the fistula. A palpable thrill is likewise typical, and both of these characteristic phenomena can be abated by digital occlusion of the opening.

Obliteration of the fistula is followed by gradual restoration of the cardiac status to normal. As the sudden closure of a very large fistula may overburden an embarrassed heart, intravenous infusion of fluids and blood during operation should be used sparingly unless there has been considerable loss of blood.

CORONARY ARTERY DISEASE

The indirect approach to the treatment of coronary artery disease by cervical or thoracic sympathectomy has not been accepted generally as a satisfactory method of increasing the supply of blood to the myocardium, but it has some effect on controlling pain. A vast experimental effort has been directed toward the development of a method of producing an extracardiac collateral blood supply to the heart, but as yet no procedure has been universally adopted by surgeons who are working in this field. Experimental evidence has been presented which demonstrates the feasibility of utilizing a vein graft from the aorta to the coronary sinus in order to revascularize the heart, and this method, although difficult, is being used in treating a limited number of patients at present.[27] Similarly, there is the suggestion that a systemic artery, such as the internal mammary artery, be implanted into the myocardium so that anastomotic channels might form between it and the coronary arteries.[14, 34] Experiments with this method have demonstrated that this does occur to a certain extent, but fibrosis is likely to occlude the new vessels subsequently.

CONSTRICTIVE PERICARDITIS

The diagnosis of chronic constrictive pericarditis can usually be made without difficulty. The heart sounds are quiet, the pulse pressure diminished, the venous pressure increased, and the kymographic studies of the cardiac border show little excursion. Although the heart size, as measured in a roentgenogram, is frequently smaller than normal due to the contraction of the pericardium, it may be larger due to the presence of pericardial fluid and the thickness of the pericardium. In the more chronic forms, calcification in the pericardium can be visualized. There is pronounced reduction in exercise tolerance, and when cardiac filling and function is severely disturbed by the scar formation, there is enlargement of the liver, and ascites. Not infrequently a diagnosis of cirrhosis of the liver is made erroneously.

The surgical treatment of constrictive pericarditis is well established.[28] It consists in the removal of the pericardium first from the left ventricle, then as much as is necessary from the right ventricle and anterior surface of the heart to free all constriction. This usually requires the denuding of the entire anterior surface from beyond the left phrenic nerve, the apex, the auriculoventricular groove, and the right atrium and ventricle, including the cavae. The use of the median sternotomy incision to gain proper exposure is recommended.[22]

It is held that excision of the pericardium for tuberculous pericarditis should be done only after the disease has become quiescent. However, success-

ful surgical treatment in a number of cases in which the disease was in an early stage has led to the suggestion that pericardectomy be employed in the presence of active disease in patients who are losing ground. Four such cases have been reported by Holman.[23] A cure resulted in three cases, and improvement in one. Large doses of antibiotics were used pre- and postoperatively.

CONSTRICTIVE VALVULAR DISEASE

The operative treatment of mitral stenosis resulting from rheumatic fever has been one of the most challenging problems in cardiac surgery. Although in many cases the patient can be maintained on a medical regimen and enjoy a comparatively normal existence, in many others progressive narrowing of the mitral valve causes pronounced physical disability and early death.

The suggestion of Brunton[5] in 1902 that the stenotic valve might be treated by surgical incision led to a number of such attempts. The approaches used included the left ventricle, left auricular appendage, and the pulmonary veins. Many of these pioneer efforts resulted in death due to mitral insufficiency which occurred when a portion of the stenotic valve was removed or torn.

It is now felt that with the methods currently being used a more selective kind of valvulotomy can be performed by incising or fracturing the sealed commissures. The approach is through the left auricular appendage which is opened above an occluding clamp after a purse-string suture has been placed around the base. The index finger is inserted through the opening, as the clamp is removed, and bleeding is thereafter controlled by slight tension on the purse-string suture. The tip of the index finger, in the atrium, can then be used to gauge the degree of stenosis, and, at times, the amount of regurgitation. When "finger fracture" of the valve is used, it is accomplished by pushing the finger through into the left ventricle with the resulting tear usually occurring at the commissures. A commissurotomy by cutting with a special knife, which is guided to the proper position along the index finger, may be necessary if the valve is very rigid. Cutting the anterolateral commissure is the procedure of choice when incision is required, but incision of the medial commissure also may be necessary. The occluding clamp is reapplied, and the opening is closed with continuous silk. Tying the purse-string suture may be substituted for reapplying the occluding clamp, but if this is done the incision into the auricle should be sutured to prevent subsequent hemorrhage should the purse-string suture loosen.

Although knife commissurotomy would appear to offer certain advantages in the accuracy of placing the incision, it has been found that the simpler technique of finger fracture alone suffices in most instances.

The mortality rate for these procedures varies directly with the degree of morbidity present in patients selected for operation. In the most favorable cases, a mortality rate of 5 to 10 per cent can be expected. If the least favorable patients are selected, much higher fatality rates will result, but those who survive may have greater benefit.

Favorable candidates for operation are those who have moderate to severe disability from mitral stenosis with little or no regurgitation, frequent episodes of congestive pulmonary symptoms, and high pulmonary artery pressure (observed in catheterization studies) plus reduced cardiac output without appreciable increase upon exercise. Contraindications to operation are: Associated valvular lesion, active rheumatic disease, uncontrollable failure, left ventricular enlargement, and severe mitral insufficiency.

As the field of cardiac surgery develops it is important to collect preoperative and postoperative physiological data so that an accurate appraisal of the benefit of operation can be obtained. Only in this way will it be possible to determine how frequently and well the procedure has corrected the mechanical problem, and how permanent the benefit is. Close collaboration between cardiologist and surgeon is an essential aspect of this work.

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Western Equine and St. Louis Encephalitis in Man, California, 1945-1950

Edwin H. Lennette, M.D., Ph.D., and W. Allen Longshore, M.D.,
Berkeley

SUMMARY

A large group of etiologic agents, some known and some unknown, produce in man a clinical syndrome now labeled "infectious encephalitis."

The separation, from this larger group, of single disease entities which cause similar clinical symptoms is possible, but calls for diagnostic acumen plus supporting laboratory evidence. Two etiologically specific entities, western equine encephalitis and St. Louis encephalitis, are frequently encountered in rather well-defined areas of California, the Central Valley and Imperial Valley; and there is a definite seasonal pattern of occurrence—June through October. There are certain guides that are helpful in differential diagnosis. Establishing a diagnosis on the basis of clinical evidence is difficult. Laboratory studies are of great importance not only for diagnosis in the individual case but for advancement of etiology. Specimens are worthless unless taken at proper intervals and submitted by methods described.

It is probable that encephalitides caused by still unknown agents exist in California. The isolation and identification of new encephalitogenic viral agents will depend in large measure upon the submission by physicians of suitable specimens from patients with central nervous system disease in which the cause is obscure.

THE term infectious encephalitis is a broad clinical one which refers to an inflammation of the brain produced by a living agent.

In public health morbidity reporting, "infectious encephalitis" is commonly used in a more restricted sense, and theoretically includes only the so-called arthropod-borne viral encephalitides occurring in this country—eastern and western equine encephalomyelitis and St. Louis encephalitis, and von Economo's disease.* In practice, however, physicians commonly report in this category, in addition to the above diseases, not only those encephalitides presumed to be infectious in origin, and for which the etiologic agent has not yet been defined, but also those encephalopathic conditions secondary to infectious processes of known cause, such as mumps, measles, varicella, and influenza. The present report is concerned primarily with "infectious encephalitis" caused by one or the other of two viral agents, namely, the viruses of western equine encephalomyelitis and of St. Louis encephalitis.

Infection of man with western equine encephalomyelitis virus was first recognized in 1938 in California;[6, 7] prior to that time the virus was considered to produce a disease only in horses, since the virus was first isolated from this species,[9] in which it had produced extensive epizootic disease.

Human infection with the St. Louis virus was first recognized in St. Louis, Mo., in 1933.[10] In California, serologic evidence of human infection was reported in 1939 by Howitt,[7] and the virus was isolated for the first time in this area from a fatal human case in 1945 by Lennette.[8] In the years following the recognition that these agents could cause infection of man, human illness attributable to these viruses has been found to be relatively common.

The purpose of the present communication is to summarize certain observations concerning epidemiologic and clinical aspects of encephalitis caused by these two specific agents.

EPIDEMIOLOGIC CHARACTERISTICS OF WESTERN EQUINE ENCEPHALOMYELITIS AND ST. LOUIS ENCEPHALITIS IN CALIFORNIA

Prevalence. During the six-year period from 1945 through 1950, a total of 1,251 cases of encephalitis was reported to the State Department of Public Health (Table 1). Of this total, 154 cases were classified as "other encephalitides," i.e., they were postinfectious or postvaccinal types. There remained, therefore, a residue of 1,097 cases which were thus allocated to the "infectious encephalitis" category, which by definition, as pointed out above, should include only the arthropod-borne viral encephalitides and von Economo's disease, but in actual practice includes a diverse group of encephalopathic conditions of unknown cause.

There was wide variation from year to year in the number of cases of "infectious encephalitis" reported. The incidence was highest in 1945 and 1950, when 302 and 357 cases, respectively, were reported. The lowest number of cases reported was 71, in 1948.

Of the 1,097 cases in the "infectious encephalitis" grouping, 309 (28 per cent) were determined by

Presented before the Section on General Medicine at the 80th Annual Session of the California Medical Association, Los Angeles, May 13-16, 1951.

From the Viral and Rickettsial Disease Laboratory and the Bureau of Acute Communicable Diseases, California State Department of Public Health, Berkeley.

* This is in conformity with the classification established by the American Public Health Association.[1]

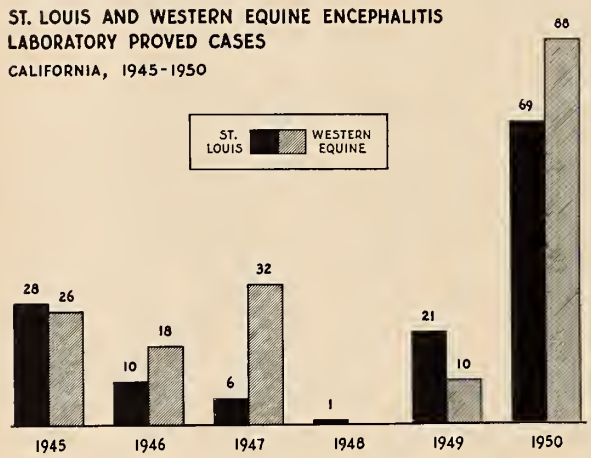
TABLE 1.—*Distribution, by Year, of 1251 Reported Cases of Encephalitis, California, 1945–1950.*

Year	Total Cases All Encephalitides	Total Cases Recorded as "Infectious Encephalitis"*	Laboratory-Confirmed Cases of Western Equine and St. Louis Encephalitis			Total Cases Recorded as "Other Encephalitides"†
			Total	W.E.	St. Louis Enceph.	
1945	311	302	54	26	28	9
1946	177	160	28	18	10	17
1947	141	127	38	32	6	14
1948	75	71	1	0	1	4
1949	128	80	31	10	21	48
1950	419	357	157	88	69	62
Total	1,251	1,097	309	174	135	154

* See text for definition.

† This category includes encephalitis following infection with such agents as the viruses of rubeola, varicella, mumps, herpes, influenza, etc., and the postvaccinal encephalopathies.

Chart 1.—Distribution, by year, of laboratory-confirmed cases of western equine and St. Louis encephalitis, California, 1945-1950.



laboratory methods to be caused by the western equine or St. Louis viruses (see Table 1 and Chart 1). Laboratory studies were not done in all instances, and it would appear probable that had blood specimens been available for examination in more of these reported cases, these viruses might have been found to be the infecting agents in additional instances. For example, in 1950, a total of 357 cases of "infectious encephalitis" was reported. Serologic tests were done on blood specimens available from 272 of these patients and 157 (58 per cent) of them had serologic evidence of current clinical infection with the St. Louis or western equine viruses. In addition, the fact that the blood of the remaining 115 patients was negative for these viruses* indicates that an appreciable proportion of patients (42 per cent of 272 tested) who were classified as having "infectious encephalitis" actually had a clinical condition caused by some other agent and suggests the possible existence of other neurotropic viruses as yet unrecognized.

Geographic distribution. Figure 1 gives the geographic distribution, by county, of 1,078 reported

* Either specific antibodies did not develop or there was no rise in antibody titer during the course of the illness.

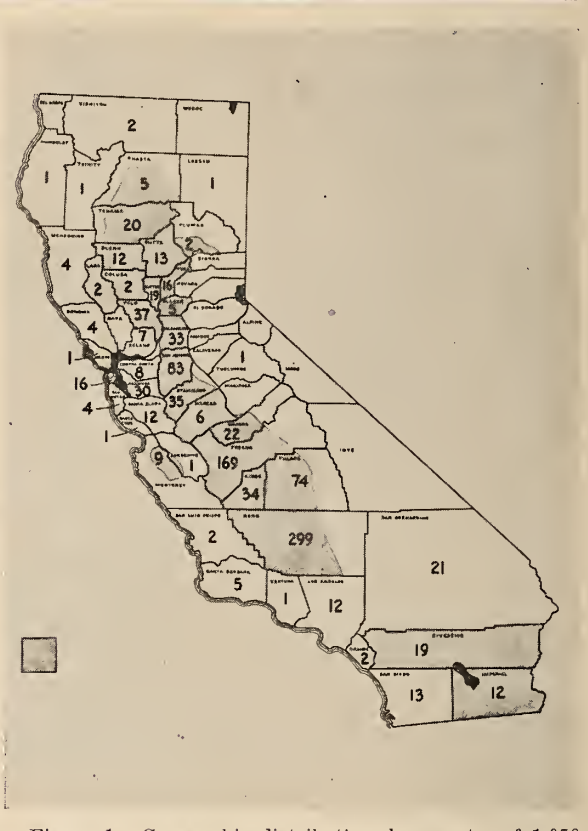


Figure 1.—Geographic distribution, by county, of 1,078 reported cases of "infectious encephalitis," California, 1945-1950. (Shaded areas indicate counties in which laboratory-confirmed cases of western equine or St. Louis encephalitis occurred.)

cases of "infectious encephalitis" during the period 1945-1950.* The cases have been allocated by county in which infection presumably occurred. It will be noted that cases were reported from 46 of the 58 counties in California. The preponderance, however, was reported from the Central Valley areas, with the largest number in Kern, Fresno, San Joaquin, and Tulare counties.

* Table 1 gives data on a total of 1,097 cases of "infectious encephalitis" reported. Figure 1, however, covers only 1,078 cases, since 19 were in transient workers and hence could not be allocated to any specific county.

Figure 2.—Distribution, by county, of 173 cases of western equine encephalitis (left map) and 132 cases of St. Louis encephalitis (right map), California, 1945-1950. (Does not include one case of western equine and three of St. Louis encephalitis which could not be allocated by county.)

In a comparison of Figure 1 with Figure 2 it will be noted that laboratory-proved cases of western equine and St. Louis encephalitis, which are included in the "infectious encephalitis" category, appear by and large to be confined to the Central and Imperial valleys. These proved cases of western equine and St. Louis encephalitis have been reported from only 23 counties of the state (Figure 1).

The geographic distribution within the state is limited, essentially, to the hot, irrigated agricultural sections of the Central and Imperial valleys, and in all probability reflects the distribution of the known mosquito vectors.

Seasonal distribution. The restriction of the occurrence of cases of these two encephalitides to a definite season is rather striking, as can be seen from Table 2 and Chart 2. On the other hand, it will be noted that cases of "encephalitis" (without regard to infecting agent) occur in every month of the year; and, if the category is narrowed to include only reported cases of "infectious encephalitis," this year-round pattern still obtains. The occurrence of a pronounced increase in the number of cases reported during the months of June through October, with the highest incidence during July, August and September, is also brought out in Table 2 and Chart 2. If consideration of seasonal occurrence is confined to laboratory-confirmed cases of St. Louis and western equine encephalitis, the limited period of incidence is particularly evident; laboratory-confirmed cases occurred only during

TABLE 2.—*Distribution, by Month of Onset, of 1251 Reported Cases of Encephalitis, California, 1945–1950.*

Mo. of Onset	Total Cases, All Encephalitides	Total Cases Recorded as "Infectious Encephalitis"*	Total Cases Recorded as "Other Encephalitides"*	Laboratory-Confirmed Cases of West. Equine and St. Louis Encephalitis
Jan.	43	31	12	....
Feb.	32	24	8	....
March	34	22	12	....
April	33	24	9	....
May	39	29	10	....
June	71	48	23	9
July	241	219	22	78
August	315	299	16	107
Sept.	249	241	8	94
Oct.	82	75	7	21
Nov.	43	34	9	....
Dec.	33	26	7	....
Not stated	36	25	11	....
Total	1,251	1,097	154	309

* See Table 1.

Chart 2.—Seasonal distribution of encephalitis in California, 1945-1950.

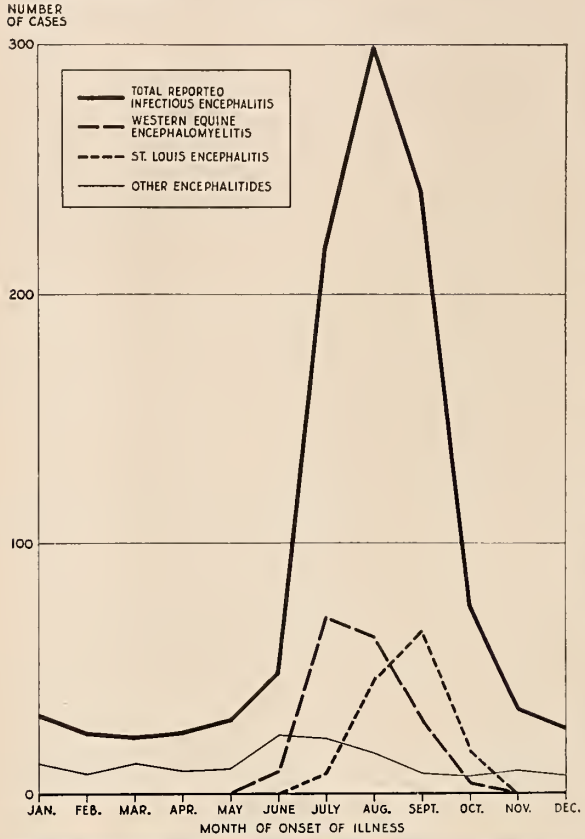


TABLE 3.—*Distribution, by Month of Onset, of 309 Laboratory-Confirmed Cases of Western Equine and St. Louis Encephalitis, California, 1945–1950*

	Western Equine		St. Louis	
	No.	Per Cent	No.	Per Cent
Jan. to May	.....	.....	.....	.....
June	9	5.2	.....	.....
July	70	40.2	8	5.9
August	62	35.6	45	33.3
Sept.	29	16.7	65	48.2
Oct.	4	2.3	17	12.6
Nov.-Dec.	.....	.....	.....	.....
Total	174	100.0	135	100.0

the months of June through October. This seasonal distribution suggests that cases which are diagnosed as "infectious encephalitis" during the period November through May are not caused by the western equine or the St. Louis viruses, but are attributable to some other causal agent or agents. The seasonal distribution also coincides with the seasonal variations in the numbers of the arthropod vectors.

The difference in seasonal incidence of western equine encephalitis when compared with that of St. Louis encephalitis is also of interest. Two rather distinct waves are apparent. Chart 2 and Table 3 illustrate this point. Western equine encephalitis, in general, usually appears a month earlier than St. Louis encephalitis, and reaches its peak in July, with 80 per cent of the cases occurring by the end of August. St. Louis encephalitis, in contrast, appears somewhat later, and usually reaches its peak in September, with 60 per cent of cases occurring during September and October. This temporal difference in incidence suggests that the viral agents may be transmitted by different vectors.

TABLE 4.—*Distribution, by Age of Patient, of 309 Laboratory-Confirmed Cases of Western Equine and St. Louis Encephalitis, California, 1945–1950.*

Age	Western Equine		St. Louis	
	No.	Per Cent	No.	Per Cent
Under 1 year	35	20.1	2	1.5
1– 4	26	14.9	20	14.8
5– 9	16	9.2	16	11.8
10–19	24	13.8	25	18.5
20–29	10	5.7	24	17.8
30–39	13	7.5	19	14.1
40–49	17	9.8	11	8.2
50 and over	33	19.0	18	13.3
Total by type	174	100.0	135	100.0

Some of the factors involved in the determination of the geographic and seasonal distribution have been established by the work of Hammon and Reeves and their associates[3, 4, 5] in the Kern County area. These investigators reported certain mosquitoes (for example, *Culex tarsalis*) are the vectors mainly responsible for the transmission of western equine and St. Louis encephalitis in California, and they suggested that the probable natural infection cycle is bird-mosquito-bird; infection in the horse and man is accidental and is extraneous to the basic cycle necessary to maintain the agent in nature. The seasonal distribution observed agrees with the known biologic requirements of the reported vectors.

Age and sex distribution. As to the age distribution of patients in the laboratory-confirmed cases, there is a striking difference between St. Louis encephalitis and western equine encephalitis. It will be noted in Table 4 that in a six-year period only two cases (1.5 per cent) of St. Louis encephalitis occurred in persons under one year of age, whereas 35 (20.1 per cent) of the patients with western equine encephalitis cases were in this age group. The reason for this difference is not yet clear. One explanation might be that since inapparent or subclinical infection with the St. Louis virus is more widespread than is similar infection with the western equine virus,[11] more persons are immune to the former than to the latter equine virus. Consequently, more newborn children might have immunity (by reason of passive transfer of antibody from the mother) to one agent than to the other.

The relative incidence of St. Louis and western equine encephalitis in infants is reversed in the 20-29 and 30-39 year age groups. Of the proved cases of St. Louis encephalitis, 17.8 per cent occurred in the 20-29 age group and 14.1 per cent in the 30-39

TABLE 5.—*Distribution, by Sex of Patient, of 309 Laboratory-Confirmed Cases of Western Equine and St. Louis Encephalitis, California, 1945–1950.*

Sex	Western Equine		St. Louis	
	No.	Per Cent	No.	Per Cent
Male	121	69.5	85	63.0
Female	53	30.5	50	37.0
Total	174	100.0	135	100.0

group; comparable figures for western equine encephalitis are 5.7 per cent and 7.5 per cent respectively.

With the exceptions mentioned, the occurrence of both diseases was fairly evenly distributed over the various age groups.

In the laboratory-confirmed cases there were about twice as many male patients as female (Table 5). This perhaps reflects a difference in opportunity of exposure, which, in turn, is dependent upon occupation. Such an explanation is not fully satisfactory, however, since the difference in incidence as between sexes is equally evident in the childhood group, in which differences in opportunity for exposure are not so clearly related to occupation.

Rural and urban distribution. Risk of infection with the two viruses under consideration appears to be greater under rural than under urban living conditions. Thus, in 1950, of the 157 laboratory-proved cases of encephalitis, 113 were in residents of rural areas, and the remaining 43 were in urban residents.

The extra hazard presumably inherent in the rural areas may be referable to the absence of, or less effective, mosquito control and to the increased exposure to the vector which is a concomitant of the conditions under which agricultural laborers work and live.

CLINICAL ASPECTS

It is virtually impossible to distinguish between western equine encephalitis and the St. Louis type solely on a clinical basis, and it is extremely difficult to differentiate these two specific viral encephalitides from a multitude of other encephalitides. (This aspect will be considered further in the discussion of differential diagnosis.)

In general, the symptoms and signs are those associated with any encephalitis of infectious origin. There is commonly an abrupt onset, with symptoms similar to those in many other acute systemic infections. The illness usually begins with high fever, malaise, headache, stiffness of the neck, and chilly sensations or, sometimes, frank chills. The fever generally reaches 102° to 103° F. and is of the continued type. In severe cases it may go as high as 106° F. The fever reaches a maximum in two to three days and remains elevated for several days, then gradually declines. The duration of fever is usually from seven to ten days.

Evidence of central nervous system involvement generally is not manifested until the third to fifth day following onset of the illness and the effect may range from minimal to severe. Signs of central nervous system involvement generally appear at about the time the fever approaches its maximum.

In infants, encephalitis may be evidenced by apathy, muscular twitchings, restlessness, irritability, stiffness of the neck, difficulty in feeding, convulsions, and increased tension of the fontanel.

In the course of their illness adults usually have severe headache and stiffness of the neck, sometimes with increased irritability, tremor, some degree of mental disturbance (drowsiness, apathy, lethargy, stupor, coma), disorientation, speech difficulties, and, occasionally, extraocular muscle disturbances (diplopia, strabismus, ptosis, etc.). Transient abnormalities in reflexes are the rule. Muscle weakness may occur, but frank paralysis is not commonly encountered.

Differential diagnosis. Clinical differentiation of illness produced by the western equine and the St. Louis viruses from other encephalitic syndromes is extremely difficult. Viral diseases frequently confused with western equine and St. Louis encephalitis are non-paralytic poliomyelitis; encephalitis associated with, and secondary to, other acute infections, such as mumps, herpes simplex, measles, and chickenpox; postvaccinal (smallpox or rabies) encephalitis; rabies; and lymphocytic choriomeningitis.

In addition to the specific viral conditions just listed, other clinical entities which may produce similar clinical findings must be considered in making a diagnosis—tuberculous meningitis; coccidioidal meningitis; tetanus; cerebral malaria; brain tumor; cerebrovascular disease; sunstroke; and von Economo's disease.

Some of these conditions can be tentatively eliminated from consideration as western equine or St. Louis encephalitis on the basis of clinical manifestations or characteristics, while others can be confirmed or ruled out only on the basis of results of laboratory tests.

Specifically, there are several helpful points of differentiation. The usual high fever of western equine and St. Louis encephalitis and the rather abrupt onset contrast with the relatively lower fever and insidious onset of poliomyelitis. The occurrence of chills is indicative of encephalitis rather than poliomyelitis. If frank paralysis develops, encephalitis is unlikely.

Microscopic, cultural, and immunologic examination of the cerebrospinal fluid assists in establishing or discarding a diagnosis in the purulent bacterial meningitides, tuberculous meningitis, and coccidioidal meningitis. A high content of lymphocytes in the spinal fluid may indicate lymphocytic choriomeningitis (apparently rare in California), aseptic meningitis (Wallgren), or suggest the possibility of mumps meningoencephalitis. In western equine and St. Louis encephalitis there is generally an increase in the number of cells in the spinal fluid (neutrophils early in the disease, lymphocytes later

in its course) and in the protein content. These pathologic changes reflect the invasion of the central nervous system by the virus but give no assistance in identifying the virus.

A history of a preceding acute illness may in itself suggest the correct diagnosis of encephalitis associated with measles, mumps, varicella, influenza, etc.

It is important to recognize that encephalitis due to mumps virus is not uncommon and that it may and does occur as the first and only manifestation of infection with this virus—that is, without clinical evidence of coexisting glandular involvement. The diagnosis in such cases is suggested by a history of exposure to mumps, and is confirmed by examination of serial blood specimens to ascertain the presence of a rising antibody titer. In California in 1949-1950, a diagnosis of mumps encephalitis was substantiated by laboratory tests in 83 cases.

Postvaccinal encephalitis is readily separated from other conditions when adequate inquiry is made into the use of prophylactic vaccines prior to the onset of the illness. The most common incitants of postvaccinal encephalitis are anti-rabies (Pasteur treatment) and smallpox vaccine. The latter is a hazard primarily in children over one year of age. Similarly, history of a wound would suggest tetanus; the bite of an animal, rabies.

Examination of blood smears may be utilized to determine whether or not the illness is caused by the malarial parasite.

Cerebral accidents and brain tumor may be differentiated on the basis of localized and localizing neurological abnormalities in the absence of evidence of a systemic infection.

In summary, the history, the symptoms, the observations in physical examination and the results of the usual clinical laboratory tests will generally permit the arrival at an early, although tentative, diagnosis of encephalitis caused by a living agent. Several points may be of assistance in differentiating St. Louis and western equine virus infections from other encephalitides in this broad group. On the basis of current knowledge, a case of clinically diagnosed encephalitis is more likely to be one of western equine or St. Louis encephalitis if it was contracted in the Central or Imperial valleys and onset was during the months of June through October. In addition, the tenability of a diagnosis of western equine or St. Louis encephalitis is increased if the patient is a male, and is further enhanced if the patient is from a rural area. It should be emphasized at this point that these epidemiologic criteria are generalizations from information thus far available, and should not be interpreted to mean that infections with the western equine or St. Louis viruses may not occur in other circumstances. Continued epidemiologic observations are necessary to assess the validity of these working considerations.

For final etiologic diagnosis of western equine or St. Louis encephalitis, laboratory studies are necessary.

LABORATORY DIAGNOSIS

One method of establishing the diagnosis is the isolation of the causal agent. However, the isolation and subsequent identification of viral agents is still in major part a research procedure, and involves considerable time, effort, and expense. Attempts to isolate a virus from such material as throat washings and spinal fluids, therefore, are not warranted for routine diagnostic purposes;* serologic methods will generally give valuable information much more readily and quickly, and at less cost.

Viral isolation studies, however, are desirable, and indeed mandatory, if etiology with regard to encephalopathic conditions is to be advanced. Whenever possible, tissues taken at postmortem should be tested by animal inoculation for the presence of viral agents. Only by such continuous search will new agents be uncovered and their importance in the causation of human illness be assessed. Central nervous system tissue obtained at postmortem should be taken with aseptic precautions, and generous blocks (3 cm. x 3 cm. or larger) placed individually into separate sterile, wide-mouthed tubes or jars, which should be tightly closed. The specimens should immediately be frozen on dry ice or in the freezing compartment of a compressor-operated refrigerator and kept frozen until tested. If it is necessary to send specimens to a laboratory at some distance, the containers should be shipped under dry-ice refrigeration. This can be accomplished by packing the specimen containers in a cardboard carton containing dry ice and a filler such as crumpled paper or sawdust to take up the space released by evaporation of the dry ice.

For diagnosis of the viral encephalitic diseases, spinal fluid is frequently submitted to the laboratory with a request that virus isolation be attempted. Unfortunately, so seldom is a virus isolated from the specimen submitted that the procedure is considered of dubious value in the diagnostic armamentarium. As such viral agents are highly labile at ordinary room temperatures, the difficulty may be attributable to lack of refrigeration of specimens in transit, making them worthless for viral isolation purposes.

Diagnosis of western equine and St. Louis virus infections also can be made by serologic methods, and this is the procedure generally followed. It should be kept in mind that at least two specimens of blood are required. One specimen should be taken as early as possible after the onset of illness (acute-phase blood), and another taken 10 to 14 days after the first (recovery- or convalescent-phase blood). Two (or more) specimens of blood are essential because diagnosis depends upon the ability of the laboratory to demonstrate that specific antibodies have appeared, or that a significant rise in antibody titer has occurred, during the course of the patient's illness. Single specimens of blood are

* In those circumstances in which attempts at virus isolation appear desirable, a virologist should be consulted as to the type of material required, how and when it should be obtained, etc.

of little or no value in laboratory diagnosis, for the mere presence or absence of antibodies is inconclusive. Antibodies in acute-phase serum may be either newly-developed as a result of the current illness or present because of exposure to the agent at some time in the past. Conversely, the absence of antibodies in an early blood specimen does not rule out the disease in question; antibodies may appear later in the course of the illness. The results of examination of only a single specimen taken in the recovery or convalescent phase may likewise be difficult or impossible to interpret. A negative result in the convalescent phase generally may be taken to rule out the disease in question. A positive result, however, may be interpreted only as inconclusive if there is a low titer of antibody, or as presumptively positive if a high titer, comparable to that generally observed in recovered patients, is present.

For the examination of sera, the complement-fixation and the neutralization tests are used. The specimens are first examined by the complement-fixation test, since this is a simple in vitro technique, with the results promptly available. The results of tests by this method are checked by the neutralization test which is performed in mice and requires from two to four weeks.

TREATMENT

Treatment of patients with western equine or St. Louis virus infections is entirely symptomatic and supportive. Maintenance of the fluid balance is essential, and prevention of complications (particularly pneumonia) by the use of antibiotics is frequently indicated. There is no evidence that the newer antibiotics exert any effect on the course of infection with these viruses.

PROGNOSIS

In general, prognosis for life is good. The fatality rates of 5 to 22 per cent commonly stated in textbooks are based upon data on only that small proportion of patients ill enough to require hospitalization.

Evidence of permanent cerebral damage is not uncommon in infants. In some outbreaks, 10 per cent to 40 per cent of patients under six months of age who were known to have the disease were reported to have neurologic residua.[2] These figures, however, are based on recognized cases; the data are not representative of the entire range of severity of infection.

PREVENTION

Detailed discussion of methods of prevention and control of western equine encephalomyelitis and St. Louis encephalitis is not within the scope of this paper. Briefly, there are two avenues of approach—mosquito control, and specific immunization. Mosquito population reduction as a control measure is now under evaluation. Immunization of man against western equine encephalomyelitis is not widely employed; the vaccine is used primarily where the risk of infection is particularly great, as in laboratory workers. No specific vaccine against the St. Louis virus is available at present.

1392 University Avenue.

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Progressive Adhesive Arachnoiditis Following Spinal Anesthesia

Ward W. Woods, M.D., and Roland G. Franklin, M.D., *San Diego*

SUMMARY

Neurological complications—some of them serious—sometimes occur following spinal anesthesia. In the majority of the relatively few cases in which they occur, they are caused by factors which can be obviated.

Rigid adherence to defined safeguards will reduce the incidence of complications and overcome most of the objections to the procedure.

KENNEDY, Effron and Perry[1] in a recent communication citing 12 cases in which neurologic complications followed spinal anesthesia, concluded: "Spinal anesthesia is accompanied by many definite and terrible dangers which are far too little appreciated by surgeons and anesthetists. From a neurological point of view, we give the opinion that spinal anesthesia should be rigidly reserved for those patients unable to accept a local or general anesthetic."

Gunnar Thorsen,[2] who in 1947 reviewed the world literature and, in addition, analyzed the complications following spinal anesthesia in 2,493 cases, reached more moderate conclusions: "Whether [spinal anesthesia], performed by trained anesthetists, with present and future resources at their disposal, can be entirely replaced by less risky methods cannot as yet be decided. Until this is settled [spinal anesthesia], should . . . be reserved for major, complicated operations and those requiring complete muscular relaxation or a contracted intestine."

It is the purpose of this presentation to summarize the neurologic complications of spinal anesthesia, to report a case of progressive adhesive arachnoiditis following spinal anesthesia (with autopsy observations) and, finally, to present the authors' opinions as to the role of spinal anesthesia in modern surgery.

NEUROLOGIC COMPLICATIONS FOLLOWING SPINAL ANESTHESIA

Cerebral Manifestations. Of these, headache is by far the most common, occurring in from 1 per cent to 18 per cent of patients in the various reported series of cases. In addition, dizziness, disturbances of vision, and occasionally, mental disturbances may occur. It is generally accepted that the cause of these phenomena is a loss of spinal fluid which passes from the subarachnoid space through the puncture hole into the subdural space, and thence out along the nerve roots. This results in intracranial hypotension with resultant traction on pain-bearing structures such as the vessels or the dura. Cranial nerves may be similarly involved.

Infection. There have been sporadic reports of spondylitis, epidural abscess, subdural abscess, encephalitis and meningitis following spinal anesthesia. These are obviously preventable complications.

Trauma. Direct trauma to the paravertebral musculature and ligamentous structures may result in low back pain of varying duration and intensity. Epidural and subdural hematomas also may occur. The most serious complications, however, arise from the injudicious choice of the site of puncture at or above the conus medullaris with resultant intramedullary injection of the anesthetic agent and subsequent mechanical and myelolytic destruction of the cord substance. Similar trauma may occur with inadvertent intraneural injection of a nerve root. Occurrence of focal peripheral pain immediately upon puncture should give adequate warning before intraspinal injection of the anesthetic agent is undertaken. The danger of trauma from catheterization of the subarachnoid space is being more and more frequently recognized. It is evident that the above complications due to trauma in performing spinal anesthesia can be avoided by scrupulous attention to the technique of administration.

Complications due to intraspinal injection of foreign agents. This danger has not been emphasized sufficiently in the past. Data given in reported cases of severe complications following spinal anesthesia do not eliminate the possibility of accidental injection of some agent physically indistinguishable from the anesthetic solution. For example, qualified anesthetists now store ampules of the solutions which are administered intraspinally (Pontocaine,® 10 per cent dextrose, ephedrine, or procaine-ephedrine mixtures, Nupercaine,® and Metycaine®) in a colored solution such as tincture of Zephiran® or Merthiolate.® Not infrequently the contents of the ampules assume the color of the dyed antiseptic solution, indicating defects in the glass of the ampules. In the past, colorless sterilizing agents such as Bard-Parker solution, alcohol, or dilute phenol solutions, were commonly used to sterilize ampules used in spinal anesthesia, and if the ampules were defective the anesthetic agent could have become grossly contaminated with a highly destructive agent which must, in turn, have caused irreparable damage to the intraspinal structures. One anesthetist who has been concerned with this problem has collected, in his own practice over the past three years,

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75 such contaminated ampules. Save for the warning tint absorbed from immersion in dyed solutions, they might have been used for injection. No flaws in the ampules were noted in close inspection.

Complications due to the spinal anesthetic agent. Experimental studies carried out on animals have revealed that all spinal anesthetic drugs are destructive to nervous tissue and the meninges if employed in excessive concentration. This degree of concentration is, however, far in excess of the concentrations normally used in clinical spinal anesthesia. Nevertheless, many cases in which damage to the nervous tissue and meninges has occurred following spinal anesthesia have been reported. This damage, observed at operation and autopsy, was identical with that produced experimentally. The changes may be either acute or chronic. Pathologic changes observed in the acute stage were pleocytosis and evidence of hyperemic inflammatory reaction of the meninges. In cultures of spinal fluid no bacterial growth was noted. In cases in which the spinal cord was involved, there were varying degrees of cellular and myelin degeneration, edema, and round cell infiltration, especially at the periphery. At the roots of the cauda equina there was disintegration and fragmentation of the myelin sheaths, and the axis cylinders were swollen and disintegrated.

The chronic stage is one of a progressive adhesive arachnoiditis. The leptomeninges become fibrotic and adherent to each other and to the cord and dura with resultant obliteration of the subdural and subarachnoid spaces except for residual cyst-like pockets containing xanthochromic fluid. Scarring of the meninges causes pronounced constriction of the cord. The blood supply of the cord becomes impaired. In microscopic examination, necrotizing arteritis, and degeneration of the fiber tracts, particularly those of Goll and Burdach, has been observed.

Clinically, the symptoms of the acute phase appear immediately or soon after anesthesia has worn off. The first manifestations may be those of meningitis—pain, meningismus, and urinary and bowel difficulties. These symptoms may be short-lived. True neurogenic symptoms may appear localized below the level reached by the anesthetic—that is, symptoms of a lesion extending partially or completely across the cord, conus medullaris syndrome, or cauda equina syndrome. These neurogenic symptoms may subside spontaneously, may remain permanently, or may progress to those of chronic progressive adhesive arachnoiditis. Frequently, the acute stage is minimal or absent, the chronic stage appearing after a varying period of time.

Two theories of the cause of complications following spinal anesthesia—exclusive of the heretofore minimized possibility of damage caused by a contamination of the anesthetic agent—have been proposed. One is that there may be individual sensitivity to the drug used. No agreement exists on this point. Second, the factor of concentration is of undoubted importance. Thus, in low spinal anesthesia, a cauda equina syndrome may appear, whereas in high spinal anesthesia, and particularly after continuous or serial administration, the maximum point of damage seems to be in the region of the sixth to the eighth dorsal segments. This region is the lowest point of the dorsal kyphosis when the patient is supine, and consequently the point of maximum concentration.

CASE REPORT

The patient, a 47-year-old Negro, had symptoms and x-ray evidence of chronic duodenal ulcer with gastric retention. Subtotal gastric resection and vagotomy were done under continuous spinal anesthesia with Pontocaine-procaine mixture administered through the third lumbar intervertebral space. The total time of anesthesia was five hours. As the anesthetic effect wore off, the patient began to complain of pain in the back, radiating down the legs. He was unable to void urine and became incontinent of feces. These symptoms persisted, and in examination on the fourth postoperative day, scattered areas of hypalgesia and hypesthesia over the sciatic nerve distribution on both sides were noted. The temperature was 102.4° F. No evidence of motor weakness was elicited and no meningismus was present. There was atelectasis of the middle lobe of the right lung. The pain in the low back and legs gradually subsided, as did the fever, but the patient continued to have scattered areas of hypalgesia and hypesthesia over the sacral dermatomes, weakness of the gluteal muscles, urinary retention and loss of anal sphincter control. He was discharged, walking, on the 21st postoperative day.

Five months later the patient was again hospitalized. He gave a history of gradually increasing weakness and numbness of the legs and persistent lack of bladder and bowel control. In neurological examination, partial loss of response to touch, pain, and temperature below the sixth dorsal dermatome was noted, and there was complete loss of sense of position and of response to vibration of the toes bilaterally. Spastic paraplegia was present and abdominal and cremasteric reflexes were absent. Deep reflexes were increased, and extensor plantar responses were elicited bilaterally. Lumbar puncture was carried out. The spinal fluid was xanthochromic and it clotted spontaneously. A complete block was demonstrated by Queckenstedt's test. Result of a Wassermann test of the fluid was negative. In Pantopaque® myelography, scattered deposits of the medium up to the level of the eighth dorsal vertebra, characteristic of chronic adhesive arachnoiditis, were observed. Hemilaminectomy of the sixth dorsal vertebra was done. The dura appeared normal, but when opened was found to be thickened and adherent to the underlying cord which was grayish-white in color and covered by a tenacious thick membrane which was evidently a constricting fibrotic piarachnoid. No free spinal fluid was present. A small, soft-rubber catheter could not be passed in any direction between the adherent dura and the cord. Obviously, no attempt could be made to resolve the firm adhesive arachnoiditis. After the operation there was no further extension of the neurologic deficits. On the fourth postoperative day, there was sudden onset of pulmonary and cardiac collapse and the patient died.

Postmortem examination was carried out, and death was ascribed to massive pulmonary embolism. Unfortunately the brain and its coverings were not examined. The dural sac with its enclosed spinal cord and cauda equina was removed in toto. Adhesive pachymeningitis was found to exist up to about the cervicodorsal junction. Cephalad of the junction, the meninges were thickened and white but only mildly adherent to the underlying cord. Caudad, over the whole extent of the spinal cord and cauda equina, there was a dense, grayish-white, avascular, plastic exudate surrounding

the cord and the cauda; and the cauda was adherent to the thickened overlying dura. Many small cystic pockets, containing gelatinous yellow fluid, were observed posterior to the cord.

Microscopically, the gross diagnosis of chronic adhesive pachymengitis below D-4 was confirmed. In cross-sections of the cord in the cervical region degeneration, predominantly of the columns of Goll and less of those of Burdach was noted. Below D-4, the upper level of the severe constricting pachymeningitis, there was also demyelinization of the posterior columns but surprisingly little evidence of degenerative changes in the cord tissue itself. Some demyelinization at the periphery of the cord was observed. There was no evidence of cavitation or destruction within the cord. At the roots of the cauda equina there was very little demyelinization or fragmentation of the axis cylinders, in spite of the pronounced chronic adhesive arachnoiditis about them.

Certain significant factors in the case reported should be emphasized. First, a continuous spinal anesthetic was administered over a long period of time. Second, the appearance of pain immediately after the anesthetic effect had worn off suggests the possibility that a foreign agent may have been inadvertently administered. Third, the fibrotic changes in the leptomeninges were progressive. Fourth, the pathologic changes were spread over that portion of the cord and meninges which had been in contact with the anesthetic agent, and they were largely confincd to the meninges themselves, rather than to the cord. The cause of the spastic paraplegia, therefore, most probably was gradually constricting arachnoiditis with subsequent interference of adequate blood supply to the cord.

COMMENT

There can be no doubt that spinal anesthesia may result in serious neurologic complications. These complications, however, are rare; and that they occur at all need not necessarily condemn the method, because on careful analysis it appears that most of them can be avoided. The cerebral manifestations, such as headache, may be largely obviated by keeping the patient in Trendelenburg position for a sufficient period to assure sealing off of the arachnoid puncture opening. Infection and trauma obviously may be prevented by scrupulous attention to techniques. The possibility of inadvertent injection of a destructive contaminant also can be foreclosed. As to the possible noxious effect of the anesthetic agent itself, there is no irrefutable evidence of individual sensitivity to the commonly employed anesthetic agents, except with regard to patients who already have disease of the spinal cord. Final among the factors considered as a cause of damage to the meninges and spinal cord is excessive concentration of the agent. With respect to this possibility, it is mandatory that the amount of anesthetic agent applied to any portion of the cauda equina or spinal cord be carefully calculated to achieve anesthesia without excessive concentration of the drug. Also it must be borne in mind that the insult of a repeated or long-continuous application of the anesthetic drug to one area of the spinal cord may result in the same damaging effect as occurs with one single toxic dose.

It is the opinion of the authors that while there are, as Kennedy and co-workers said, "definite and terrible dangers" of spinal anesthesia, complications are infrequent and may be avoided by the unvarying observance of the following safeguards:

1. Employment of a trained anesthetist.
2. Selection of only that patient, without intrinsic disease of the spinal cord or its coverings, for whom the particular advantages of spinal anesthesia are required.
3. Use of anesthetic drugs of proven safety.
4. Employment of colored solutions for sterilizing ampules containing the agents used in spinal anesthesia.
5. Accurate spinal puncture below the conus medullaris (no higher than the second lumbar intervertebral space).
6. Precise control of the level of anesthesia.
7. Avoidance of excessive concentration of the anesthetic agent at any one point.
8. Abolition of repeated or continuous spinal anesthesia with or without catheterization of the subarachnoid space.

2330 First Avenue.

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Asthma and Cardiac Dyspnea—A Differential Diagnosis

Frank Perlman, M.D., *Portland, Oregon*

SUMMARY

There appear to be no infallible guides by which to differentiate between cardiac insufficiency and asthma as a cause of dyspnea, wheezing and coughing in elderly patients. Many of the symptoms of one condition are also symptoms of the other. Even the results of therapeutic trial cannot be relied upon to establish diagnosis, for drugs effective in treatment of heart disease may also help relieve asthma, and vice versa.

Although there is no single factor that can be considered pathognomonic, there are certain symptoms and results of tests which are more strongly indicative of one condition than of the other. Careful evaluation of all factors, while it may not serve to establish unequivocal diagnosis, will provide a basis for judicious treatment of the patient.

OFTEN in the case of elderly patients with dyspnea, coughing and wheezing, it is difficult to determine whether the symptoms are ascribable to bronchial disease or to cardiac insufficiency. In considering the problem, it is well first to establish what is meant by the terms bronchial asthma and "cardiac asthma."

Swineford and Magruger[8] adopted the purist's point of view, that asthma develops only in persons with allergic sensitivity and heart failure. Miller,[3] on the other hand, distinguished between bronchial asthma due to cardiac disturbance and bronchial asthma due to other causes. The purposes of distinction would appear to be best served by discarding the term "bronchial" and using the term "asthma," in accord with standard nomenclature, as meaning the disorder in the bronchioles usually associated with the phenomena of allergy. And the cardiac disorder which so often causes symptoms much like those of asthma is paroxysmal left ventricular failure, most frequently due to hypertensive or arteriosclerotic cardiovascular disease, with varying degree of impaired coronary blood flow.

The typical attack of dyspnea of cardiac origin occurs at one or two o'clock in the morning, awakening the patient after two to four hours of sound sleep. Shortness of breath and wheezing, and a sense of a weight on the chest, cause the patient to sit up in bed. Often the attack is relieved in a few minutes by the coughing up of tenacious mucus, and the patient then returns to sleep for the remainder of the night. More severe attacks of dyspnea and wheezing may last minutes to hours; some may, of course, progress to pronounced pulmonary edema and death. The attacks may be infrequent, or they may occur nightly. In the latter case, the patient dreads going to bed and finds that he gets more rest spending the night in a chair.

Patients with asthma, in which the infectious factor predominates, often have quite similar symptoms. They, too, are awakened usually at three or four o'clock in the morning with dyspnea, wheezing and coughing, and relief usually follows the raising of a small amount of tenacious mucus which has been dislodged by inhalation of the fumes of burning stramonium leaves or by taking one of the sympathomimetic drugs. They, too, are comfortable during the day and dread the nights with the recurrence of paroxysms.

The primary mechanisms by which the symptoms in these two disorders develop are quite dissimilar. In the asthmatic patient, the primary changes are concerned with encroachment upon the lumen of the bronchiole, with changes in the musculature and in the submucosa, with an increase in the number of mucus-secreting glands, with changes in the mucosa itself, and with the accumulation of mucus and cellular elements in the already narrowed lumen. In the patient with respiratory distress of cardiac origin, a more elaborate succession of events has been described,[1, 2] following upon the primary failure of the left ventricle. In it are concerned decreased serum protein, changes in plasma volume, and an increase in blood volume in the pulmonary circuit. After the patient has been recumbent for several hours, the factors leading up to pulmonary edema manifest themselves as the characteristic symptoms. In many instances, after a period of time, the patient also has well-established changes in the bronchioles, especially in the submucosa, and the accumulation of inspirated mucus in the somewhat narrowed lumen causes the perplexing wheeze.

The determination of which mechanism is primarily responsible in the development of dyspnea and wheezing is extremely important with regard to prognosis and treatment. One great cause of difficulty in differential diagnosis is the attempt to attribute symptoms to either one mechanism or the other. Often, in preplexing cases, the patient has both primary bronchial and cardiac disease. Riley[6] aptly stated that when symptoms of both pulmonary and cardiac origin coexist, as frequently happens in the older age group, the clinical evaluation of each with respect to its contribution to the dyspnea and wheezing may be extremely difficult, if not impossible.

Short clinical reports on the cases of two elderly patients with dyspnea, coughing and wheezing will illustrate the point.

Presented before the Section on Allergy at the 80th Annual Session of the California Medical Association, Los Angeles, May 13-16, 1951.

CASE REPORTS

CASE 1: A 70-year-old mortician was first observed in June 1947 with complaint of coughing, wheezing and dyspnea, chiefly at night, and particularly persistent in the previous three months. The patient had had perennial asthma at age 19, while living in Ohio. The attacks diminished in frequency and severity after he moved to the Pacific Northwest.

Upon examination it was noted that the lung fields were clear and there was no peripheral edema. The blood pressure was at all times within normal limits. In fluoroscopic examination, cardiac enlargement of aortic configuration was observed, with flattened diaphragms and evidence of some pulmonary fibrosis and emphysema. Seventeen per cent of the leukocytes in the sputum were eosinophils. In preliminary testing with common inhalants there was significant reaction to feathers and to house dust. An electrocardiographic tracing was definitely abnormal, with evidence of bundle branch block the principal feature (Figure 1). Clinical symptoms, however, suggested asthma due probably to both inhalant and infectious factors. Symptomatic treatment with iodides and aminophylline was given and further allergic sensitivity studies were begun. However, the respiratory distress became more pronounced and more continuous. The pulse rate at rest remained at 96, and the clinical symptoms became more apparently those of failing left ventricle. Appropriate therapy was instituted, including bed rest, low sodium intake and digitalization. Within three days the patient became asymptomatic. There was moderate diuresis with loss of eight pounds or more in body weight. As the patient then was able to resume greater activity, allergic sensitivity studies were completed and treatment with autogenous vaccine and the ubiquitous inhalants was started. A maintenance dose of 0.1 gm. of digitalis leaf daily was given, and after several months, the previous conduction defect was absent from electrocardiographic tracings (Figure 1). In the ensuing three and one-half years the patient worked daily at his profession. In that period of time he was observed twice in what appeared to be typical asthmatic attacks following a respiratory tract infection. Each attack responded within 24 hours to iodide given orally and one intravenous injection of aminophylline.

CASE 2: An 84-year-old widow was referred, with a diagnosis of asthma, by an internist. As the patient was obviously senile, there was ground for suspicion that advanced degenerative changes in the cardiovascular system were responsible for the respiratory distress. The patient had had attacks of coughing, wheezing and dyspnea over a period of 24 years. The attacks occurred at irregular intervals, without apparent relation to season or common allergens, and sometimes were so severe as to cause transient loss of consciousness. The patient recalled having had seasonal hay fever many years ago, while living in the Puget Sound area, and symptoms of chronic perennial rhinitis with recurring nasal polyps. Bacterial vaccine therapy and change of climate had given no relief. Epinephrine, by injection, was no longer effective; and inhalation of 1 per cent epinephrine solution, once effective, was becoming less so.

On physical examination, moderate tachycardia and evidence of moderate emphysema were noted. The blood pressure was 130 mm. of mercury systolic and 60 mm. diastolic. No significant abnormalities were noted in auscultation of the heart. Five per cent of the peripheral blood cells were eosinophils but there was no eosinophilia in the sputum. In an electrocardiographic tracing (Figure 1) there was a well-established bundle branch block.

As the dyspnea and wheezing appeared, from this evidence, to be caused by cardiac insufficiency, a low sodium diet was prescribed, and digitoxin (on a dosage schedule for slow digitalization) and aminophylline were given. The patient

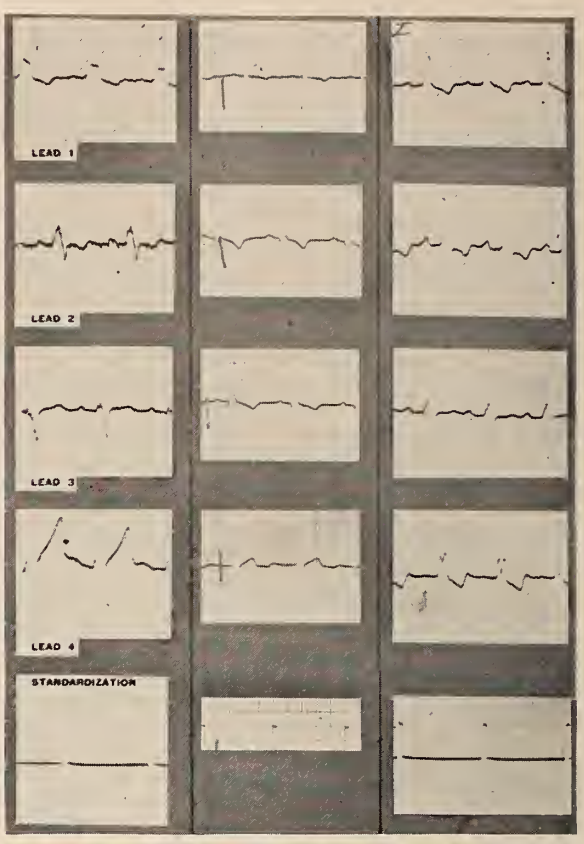

Figure 1.—*Left:* Electrocardiogram (Case 1) taken July 2, 1947. *Center:* Electrocardiogram of same patient, April 22, 1948. *Right:* Electrocardiogram (Case 2) taken May 13, 1948.

was admonished to discontinue the use of sympathomimetic drugs, especially by inhalation.

Despite conscientious cooperation, there was no improvement, and attacks continued to occur nightly. Reevaluation of the probable cause of wheezing and dyspnea was indicated. Since the digitoxin caused no reduction in pulse rate, or diuresis, or symptomatic improvement, the drug was discontinued. A regimen with potassium iodide, small doses of ephedrine and an occasional subcutaneous injection of epinephrine was started. The patient then improved slowly. When last observed, after a year on this regimen, the patient had had mild respiratory distress only occasionally after respiratory tract infection. She was taking one or two half-tablets of Tedral® a day, and an injection of 0.2 cc. of epinephrine once or twice a month. The chief night distress was moderate nasal obstruction which was controlled by use of an antihistaminic drug.

The original diagnoses of the primary cause of the respiratory distress in these two cases were far from correct. In the first case, the preponderance of evidence seemed to indicate asthma. Yet, at the time of acute recurrent respiratory distress, there was dramatic response to treatment for cardiac disease.

In the second case, in which there was no good evidence of asthma, heart failure seemed most probably the cause of respiratory distress. However, there was no improvement when adequate treatment for cardiac insufficiency was carried out, but

good response when iodides and sympathomimetic drugs were given.

In many instances the final recourse in the differentiation of the cause for paroxysmal respiratory distress in an elderly patient is therapeutic trial. Fortunately for the patient, certain drugs, especially the soluble theophylline preparation and iodides, cause little or no undesirable side effects, and the former may help to release both asthma and cardiac dyspnea. Epinephrine, subcutaneously, may also relieve cardiac dyspnea,[5] although much less dramatically than it relieves asthma. As the alternate effectiveness of these drugs only adds to the confusion, even therapeutic trial cannot be relied upon for differentiation. Although there are no infallible guides, there are certain observations and procedures that will help toward a better evaluation of the cause for dyspnea and wheezing in elderly patients and provide a basis for more judicious treatment.

Indicative of asthmatic origin:

1. A long history of asthma or other allergic diseases.
2. Other manifestation of allergic reaction.
3. Sputum tenacious and containing Charcot-Leyden crystals, eosinophils, and Curschmann spirals.
4. Eosinophilia in blood and secretions (nasal and bronchial).
5. Circulation time normal or even shortened.
6. Response, often dramatic, to iodides and sympathomimetic drugs.

Indicative of cardiac origin:

1. History or evidence of cardiovascular-renal disease.
2. Moist basilar rales in addition to sonorous and sibilant rales.
3. Sputum more fluid or frothy and even blood-tinged, without Charcot-Leyden crystals or eosinophils.
4. Respirations more rapid and the two phases less disproportioned.
5. Circulation time prolonged (whether asthma coexists or not).[4]
6. Good response to treatment for cardiac insufficiency (including bed rest, digitalis, and mercurial diuretics).[7]

DISCUSSION

In the enumeration of points indicative of each of the causes of respiratory distress, it is quite evident that there is no pathognomonic factor by which to establish a single etiologic diagnosis. Prolonged circulation time would seem to be the factor most strongly indicative of cardiac disease and eosinophilia of asthma; yet often in obviously asthmatic patients eosinophilia is not present, and often in the presence of unquestionable paroxysmal left ventricular failure there is no significant lengthening of circulation time. And so it becomes evident that a frequent error is failure to keep in mind that in mild congestive heart disease an intrinsic bronchial disorder may become prominent. On the other hand, it must not be overlooked that a patient with a long history of bronchial asthma is just as liable to cardiovascular disease as is a patient who never had asthma.

406 Medical-Dental Building.

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Extraperitoneal Pneumography

A Preliminary Report

Howard L. Steinbach, M.D., Richards P. Lyon, M.D., Earl R. Miller, M.D., and Donald R. Smith, M.D., *San Francisco*

SUMMARY

The presence of a gas in the retroperitoneal tissues makes possible a radiologic visualization of retroperitoneal organs and masses. Retropneumoperitoneum is accomplished by the injection of oxygen at low pressure into the tissues lying between the coccyx and the rectum. The technique of injection is simple and no complications have occurred with the first 30 cases. This method is particularly useful in outlining the kidneys and adrenal glands.

EXTRAPERITONEAL pneumography is a procedure in which a gas is injected into the extraperitoneal areolar tissue as a contrast medium to aid in roentgenologic visualization of the viscera which it surrounds. Carelli[3, 4] demonstrated in 1921 that carbon dioxide introduced into the renal fascia outlined the kidney, the kidney capsule and the adrenal glands. Cahill[2] reported in 1935 that he was able to determine the presence of hypertrophy and tumors of the adrenal gland by the use of this method. He also studied the adrenal gland in some patients with Addison's disease. Bariani[1] noted that when pneumoperitoneum was carried out there was sometimes an accidental diffusion of air between the parietal peritoneum and the transverse fascia which outlined the contour of the posterior abdominal viscera remarkably well.

Rivas[6] was the first to utilize generalized extraperitoneal emphysema for diagnostic purposes. By injection through a single puncture into the retrorectal areolar tissue, he produced diffuse and extensive emphysema in the cellular tissue of the entire body. This outlined the posterior abdominal viscera on roentgenograms better than previously used methods. Rivas termed this procedure retropneumoperitoneum.

ANATOMY

The anatomy of the extraperitoneal tissue has been extensively described by Rivas[7] and will be presented only briefly in this report. Between the fascia which covers the inner surfaces of the abdominal muscles and the peritoneum lies a considerable amount of extraperitoneal areolar tissue loaded with fat. It is part of an extensive layer which lines all the body cavities outside the various serous sacs, and it is continued on the various vessels, nerves and other structures which pass from the trunk into the limbs.

In the abdomen it is divisible into a parietal and a visceral portion. The former lines the walls, while the latter passes between layers of the peritoneal folds to the viscera. The parietal portion is thin and comparatively free from fat over the roof and anterior wall of the abdomen. In the pelvis this tissue is loose and fatty, and is continued up for some distance on the anterior abdominal wall, thus permitting the ascent of the bladder during its distention. In the posterior wall the tissue is large in amount, and fatty, particularly where it surrounds the great vessels and kidneys.

The visceral portions extend from the parietal portion along various branches of the aorta. The extensions are connected with the areolar coats of the blood vessels and pass with them into the mesenteries and other folds of the peritoneum, and thus reach the viscera.

The chief functions of the extraperitoneal tissue are to unite the peritoneum to the fascial and muscular layers of the abdominal wall, and to connect the viscera to the wall and to one another in such a loose manner that there will be no interference with their distention or relaxation. In addition, it is a storehouse of fat, forms sheaths for the vessels and nerves, and establishes, through a vascular plexus, communication between the parietal vessels and those distributed to the abdominal viscera.

TECHNIQUE

The authors used a procedure by which satisfactory roentgenographic outlines of some of the retroperitoneal organs were produced without causing great discomfort to the patient.

The equipment and materials used were: A local anesthetic ointment; 0.5 per cent procaine solution; a No. 20 or No. 22 spinal needle; a No. 26 hypodermic needle; a 5 cc. syringe; two Kelly bottles and rubber tubing connected to provide injection pressure as used for pneumothorax, and a pressure source of oxygen. Oxygen rather than carbon dioxide was used as the contrast medium because the rate at which it is absorbed is slow enough to give adequate time for satisfactory roentgen examination before the contrast begins to diminish. Air, which is absorbed even more slowly, would of course give more time for examination, but with it there would

From the Division of Radiology and the Subdivision of Urology, University of California School of Medicine, San Francisco.

be greater hazard of serious embolism should a vascular channel be invaded. A further advantage of oxygen is that it is available on any anesthetic equipment.

In most patients the tip of the coccyx is easily palpable relatively high in the internatal cleft: the injection needle may then be most easily inserted with the patient on his left side with knees drawn up. In the case of the obese patient with large buttocks, the coccyx lies deep in the internatal cleft and the lithotomy position has been found to be the position of choice.

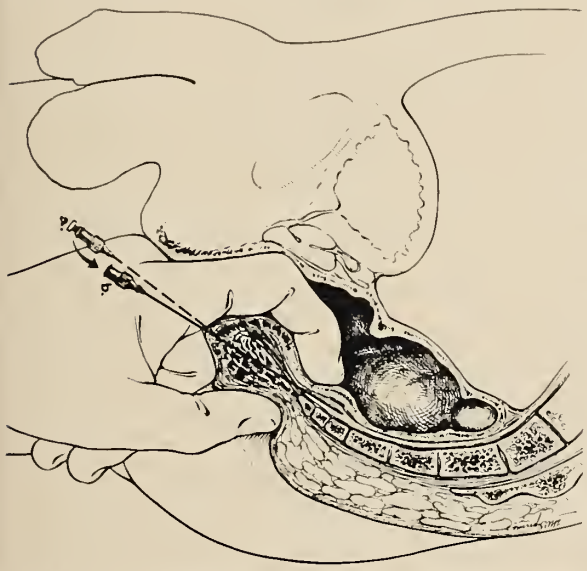

Figure 1.—Placement of the needle: (a) Plane of insertion to depth of coccygeal tip. (b) Final position for injection above anococcygeal raphe.

The anus is anesthetized with anesthetic ointment. The injection site is then prepared with antiseptic solution. A skin wheal of procaine is raised in the midline between the anus and coccyx, 1 to 2 cm. from the latter. The spinal needle, with stilette removed so that vascular intrusion will be obvious if it occurs, is then inserted through the skin and subcutaneous tissue until the tip impinges upon the tip of the coccyx. The index finger of the opposite hand is placed in the rectum and the needle is then redirected so as to slide along the anterior surface of the coccyx and through the anococcygeal raphe. The needle is then inserted another two or three centimeters, always with the point as far posterior as possible to avoid perforating the fascia propria of the rectum (Figure 1). The plunger of the syringe is withdrawn slightly to test for the perforation of a vessel and, if no blood is withdrawn, 2 or 3 cc. of air is injected. If the air does not flow easily, moving the needle or ballotting the point with the rectal finger usually will produce adequate flow.

If a generalized extraperitoneal pneumogram is desired, the patient is placed in the prone position with the head of the table tilted 10 to 15 degrees upward. If visualization of a single side is desired, the patient is placed in the lateral position with that side elevated and the table at the same angle as

Figure 2.—Normal extraperitoneal pneumogram. The kidneys, adrenals, psoas shadows, liver, spleen and bladder are outlined by gas.

Figure 3.—The gas outlines the posterior pelvic viscera well on the left side, but poorly on the right side. The patient lay on his right side soon after injection so that the gas rose to the elevated left side. A subsequent extraperitoneal pneumogram demonstrated the posterior pelvic viscera on the right side well.

before. The oxygen supply is then attached to the needle by means of a sterile section of rubber tubing containing a cotton filter. The oxygen is allowed to flow in at a rate of about 100 cc. per minute under pressure of 20 cm. of water. If greater pressure is needed, the position of the needle is not correct and must be adjusted. Volumes varying from 200 cc. to 1,200 cc., depending upon the size of the patient, have been used in the studies to date. In those patients with little properitoneal and perinephric fat, adequate roentgenograms are produced with volumes as low as 600 cc., whereas in the well-padded patient a liter or more is required.

Figure 4.—Right hypernephroma. The extraperitoneal space on the right side is occupied by a large, partially calcified mass. The kidney, adrenal gland, and spleen are well outlined on the left side. There is no gas in the extraperitoneal tissue on the right side because the areolar tissue is compressed by the large mass.

Figure 5.—Same patient as Figure 4. The lateral view demonstrates the left kidney well. The renal artery can be seen.

During the insertion of the needle a finger is placed in the rectum to keep the injector aware of the position of the needle point. If the rectum is perforated, or blood is withdrawn after the needle has reached the anococcygeal raphe, the needle is withdrawn and the examination postponed for 24 hours. If subcutaneous emphysema appears around the perineum, the needle has not been inserted far enough and still rests outside of the anococcygeal raphe. It must be inserted at least another 2 cm.

Patients who underwent this procedure were remarkably free from discomfort. A fullness in the region of the rectum was usually noticed first. Some patients noted a dull ache in the flank after 400 to 500 cc. of the gas was injected. In no case was this severe enough to interfere with the examination.

The patient remains in the position in which the gas was injected until roentgenograms are obtained. The posterior abdominal organs are usually best demonstrated about two hours after the injection has been completed. By that time the gas has extended throughout the extraperitoneal areolar tissue. Stereoscopic anteroposterior and lateral films are taken routinely. Tomography or body-section roentgenography has been found to be particularly helpful in that it eliminates the confusing shadows

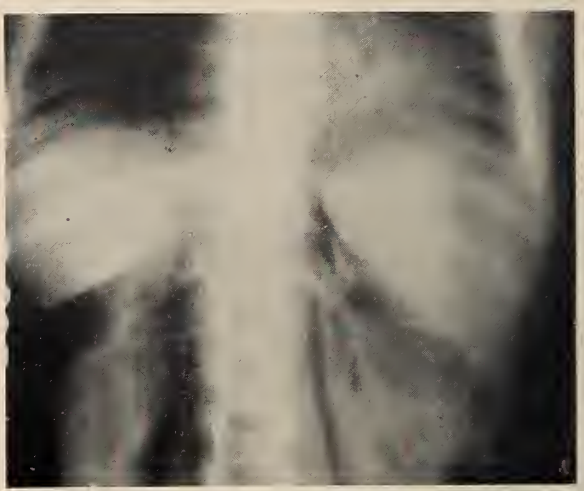

Figure 6.—Tomogram of a patient with Cushing's syndrome. The left adrenal gland is the triangular shadow outlined by gas above the superior pole of the left kidney. This gland appears to be normal. There is very little gas above the superior pole of the right kidney. An exploratory operation of the right adrenal gland was performed. It was found that the right adrenal gland was imbedded in firm areolar tissue which was separated with considerable difficulty. It freed quite easily from the upper pole of the kidney. It measured 4x2x0.5 cm. and was firmer than normal. Histologically there was evidence of hyperplasia.

caused by gas in the gastrointestinal tract and anterior abdominal wall. Additional films are taken as the need arises.

DISCUSSION

Rivas chose to inject the gas into the retrorectal areolar tissue because of its accessibility, its proximity to the extraperitoneal tissue of the posterior abdomen, and because of the absence of large blood vessels and vital viscera in that region. As the gas is injected at this site, it surrounds the rectum and extends into the cellular tissue of the parametrium which envelops the uterine tubes and ovaries. The gas extends upward along the psoas muscles, midabdominal vessels, kidneys, spleen and attachments of the diaphragm. The kidneys have their own closely adherent capsule around which is the sheath known as Gerota's sheath or capsule. This capsule encloses the upper part of the kidney and the adrenal gland. It is incomplete caudally where it communicates with the extraperitoneal areolar tissue, which also surrounds the capsule. The injected gas passes around Gerota's fascia and also extends through the defect inferiorly to outline the kidneys and adrenal glands. Some of the gas passes along the vessels into the mesentery and cellular tissue between the visceral peritoneum and wall of the stomach and bowel. If enough gas is injected it will rise into the extrapleural and mediastinal connective tissue through the apertures formed by the fibrous insertions of the diaphragm to the skeleton, and through the areolar tissue surrounding the great vessels and esophagus. The gas then passes into the areolar tissue of the neck.

The most important organs outlined by the gas are those in the pelvis and posterior abdomen. The gas injected into the retrorectal space helps in visualization of the uterus, tubes, ovaries and bladder, but these structures are partially obscured by gas surrounding the rectum and in the anterior abdominal wall. It has been found that gas may be injected directly into the cellular tissue of the parametrium through the vagina, thus outlining only those organs. The psoas muscles are sharply outlined. The external contours of the kidneys and adrenal glands stand out in contrast to the gas within Gerota's fascia. The margins of the spleen and liver are easily identified by the presence of the gas between them and the peritoneum (Figure 2).

The authors have been disappointed, as have the European investigators, in being unable to visualize the normal pancreas. This probably is due to the relatively small amount of areolar tissue surrounding it. It is hoped, however, that if a tumor or cyst of the pancreas that is not limited to the midline is present, it will be possible to visualize the lesion on either side of the midline where the areolar tissue is more abundant.

The procedure described was used in examination of 30 patients. There were no complications. Only one of the patients complained of more than mild discomfort. That patient, a woman, had pain in the back and it appeared to increase after the gas was injected. Three of the subjects were outpatients, and

Figure 7.—Retroperitoneal tumor on the left side diagnosed as lymphoid hyperplasia by the pathologist. There is an absence of gas in the retroperitoneal areolar tissue lateral to the left psoas muscle. This is due to compression of the extraperitoneal tissue by the tumor mass.

Figure 8.—Retrograde pyelogram demonstrating hydronephrosis and dilatation of the upper part of the left ureter, due to compression of the ureter by a metastatic mass. This patient had a carcinoma of the cervix.

Figure 9.—Same patient as in Figure 8. Extraperitoneal pneumogram demonstrating the left hydronephrosis. The dilated kidney pelvis and upper part of the ureter on the left side can be seen medial to the kidney shadow.

they were permitted to return home on completion of the examination. One of the patients, who had paroxysmal tachycardia following a coronary occlusion, had no ill effects from the examination.

Pathologic conditions visualized by this method were: A lesion of the lumbar spine which caused distention of the paraspinous ligaments; hypernephroma; a retroperitoneal tumor; and in two cases, hydronephrosis which was not demonstrable by usual urological diagnostic techniques.

Extraperitoneal pneumography appears to be a valuable method for examining the posterior abdominal and pelvic viscera:

1. It is simple. The needle is inserted into the cellular tissue between the rectum and sacrum—a relatively easy procedure.
2. It appears to be safe. As there are no large vessels in the retrorectal space, there is little danger of air embolus.
3. The injection is not painful.
4. Only one puncture is necessary for diffusion of oxygen to both sides.
5. Structures other than the kidneys and adrenal glands are made visible.

ACKNOWLEDGMENT

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Experimental Investigations on Action of Antihistaminic Nasal Solutions

A Preliminary Report

LAWRENCE K. GUNDRUM, M.D., *Los Angeles*

SUMMARY

The effect of antihistaminic drugs in the form of solutions for nasal instillation on the mucous membranes of rabbits was investigated. So far as histologic observations would indicate, Antistine®-Privine® was the most harmful and caused almost complete necrosis throughout the entire nasal area. Pyribenzamine® was the least harmful. Allergan® caused more damage than did Pyribenzamine in the nasal mucosa of rabbits, but considerably less than Antistine-Privine.

Clinically, the author has observed Antistine-Privine to be extremely irritating when employed as a topical application for symptomatic relief of nasal allergic disease. Pyribenzamine has caused considerable pain and discomfort in patients and has been least effective for relief of nasal congestion since it does not contain a vasoconstrictive agent. Allergan has not been observed by the author to be irritating to any degree in patients with nasal allergic disease unaccompanied by acute infection, and it has been noted to be the least irritating of these three antihistaminic solutions in nasal allergic disease complicated by infection.

ANTIHISTAMINIC drugs in the form of solutions for nasal instillation have been advertised widely as effective in the symptomatic relief of allergic diseases of the nose. The author has used a number of these preparations, some of which contain vasoconstrictive agents, for this purpose and also in treating nasal allergic reaction complicated by acute infection.

To supplement clinical observations, experiments were carried out to investigate the effect of such solutions on the mucous membranes of rabbits. This animal was selected as the most suitable because in it the nasal mucosa is comparable histologically to that of man, and because its large nasal accessory sinuses (the maxillary sinus being a part of the nose) are readily accessible to nose drops. Furthermore, the large area of olfactory mucous membrane in the posterosuperior portion of the rabbit's nose probably is more susceptible to injury than is that of man.

Read before the Twentieth Annual Mid-Winter Postgraduate Clinical Convention in Ophthalmology and Otolaryngology of the Research Study Club of Los Angeles, January 23, 1951.

METHOD OF STUDY

As a preliminary step a test was made to determine the amount of mucosal surface covered by the nose drops. One animal was selected, and ten drops of a 1 per cent solution of gentian violet was placed in each nostril. At autopsy the entire mucous membrane of the nose and portions of that of the bronchial tree and the lungs were found to be stained with the dye.

In the present study 12 animals and three different antihistaminic solutions were used. Three animals were used in each of four series. Ten drops of one of the following solutions were instilled in each nostril:

Series 1: Antistine®-Privine® (antistine hydrochloride 0.5 per cent and privine hydrochloride 0.025 per cent) three times daily for 14 days.

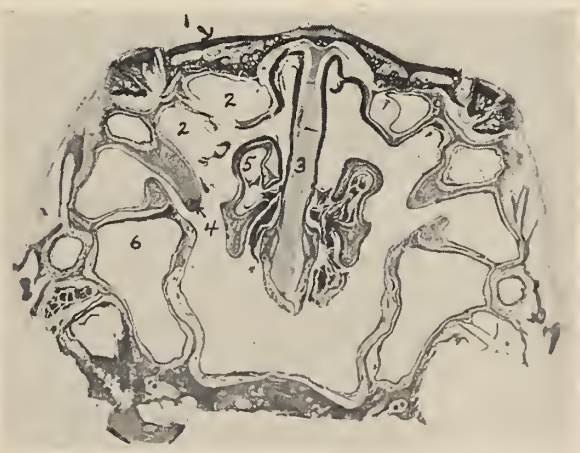

Figure 1.—Normal nose of a rabbit. Section from posterior block. 1 indicates the nasal bone; 2, the ethmoid cells; 3, the nasal septum; 4, the middle turbinate (the ethmoturbinal proper); 5, the vomeronasal organ, and 6, the maxillary sinus.

Series 2: Allergan® (pyranisamine maleate 0.1 per cent and phenylephrine hydrochloride 0.25 per cent) three times daily for 14 days.

Series 3: Allergan® twice daily for 30 days.

Series 4: Pyribenzamine® (0.5 per cent) three times daily for 14 days.

The animals were killed by intravenous injection of air immediately after the last instillation. The head was fixed in solution of formaldehyde U.S.P. After fixation, the nose was removed in one block and embedded in paraffin, and then was divided into ten blocks serially. Two sections from each block were examined histologically to determine the amount of injury or destruction, if any.

Nasal sections from three apparently normal rabbits, not subjected to the nasal instillations, were studied as controls.

RESULTS

In none of the 12 animals was there evidence of discomfort.

Some of the various degrees of histologic changes observed in the nasal mucosa of the rabbits subjected to the antihistaminic solutions may be observed in the accompanying photomicrographs. Similar nasal sections from the control animals are presented for comparison.

Figure 2.—Normal nasal mucosa of a rabbit. Section of a vomeronasal organ from the anterior block.

Results of a study of the histologic observations are summarized in Table 1.

Two sections from the anterior, the mid-anterior, the middle, the mid-posterior and the posterior portions of the nose in each animal were studied. The observations were recorded according to the progressive degree of damage. Each degree was assigned a numerical equivalent. The numerical equivalents of the greatest degree of damage observed in each portion of the nose in each animal were added to determine the total of injury at all sites (see Table 1).

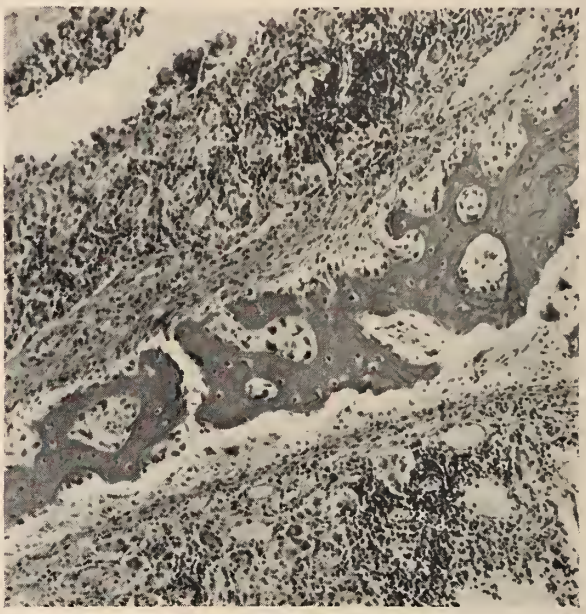

Figure 3.—Rabbit's nose treated with Antistine-Privine.® Section through ethmoid sinus (posterior block) showing complete necrosis.

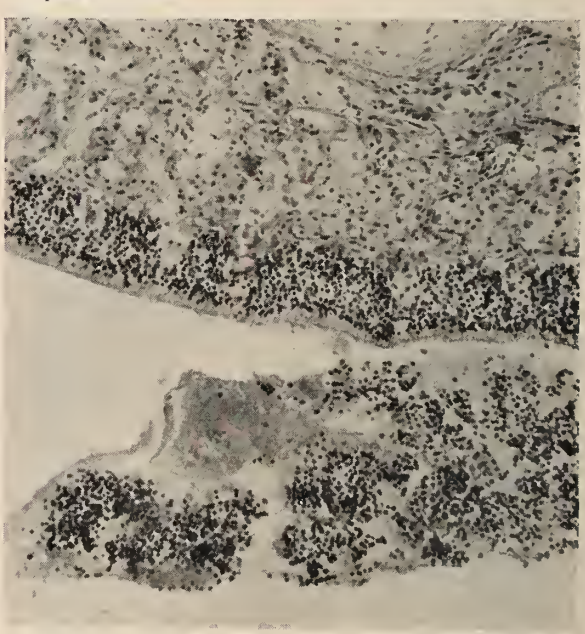

Figure 4.—Rabbit's nose treated with Allergan® for 14 days. Section through ethmoid sinus (middle block) showing congestion and small amount of pus.

Further experiments are being carried out to determine any residual damage from these three antihistaminic solutions in rabbits following a period of withdrawal of the drugs after similar courses of intranasal instillations.

In experimental animals, so far as histologic observations would indicate, Antistine-Privine was the most harmful and caused almost complete necrosis throughout the entire nasal area. The author has found this drug to be extremely irritating when employed as a topical application for symptomatic relief of nasal allergic disease.

TABLE 1.—*Histologic Observations of Nasal Mucosa of Rabbits Subjected to Nasal Instillations of Antihistaminic Drugs*

Series	Rabbit	Degree of Damage* Observed in Serial Sections: Anterior	Mid-anterior	Middle	Mid-posterior	Posterior	Sum of Injury (All Sites)	
1. Antistine-Privine	1	4	5	8	8	8	33	
3 times daily	2	2	3	8	8	8	29	
for 14 days	3	6	6	6	8	8	34	
							—	96
2. Allergan	4	2	2	5	4	5	18	
3 times daily	5	4	5	7	7	6	29	
for 14 days	6	2	5	6	7	7	27	
							—	74
3. Allergan	7	3	5	6	7	7	28	
2 times daily	8	2	3	6	6	6	23	
for 30 days	9	3	3	5	4	5	20	
							—	71
4. Pyribenzamine	10	2	3	5	5	5	20	
3 times daily	11	2	5	5	5	4	21	
for 14 days	12	5	3	3	0	6	17	
							—	58
5. Controls	13	1	0	0	3	3	7	
(untreated)	14	2	0	1	2	3	8	
	15	1	1	1	2	3	8	
							—	23

*Numerical equivalents for degree of damage: Edema, 1; congestion, 2; round cell infiltration, 3; pus, 4; desquamation, 5; slight necrosis, 6; moderate necrosis, 7; complete necrosis, 8.

Figure 5.—Rabbit's nose treated with Allergan for 30 days. Section through vomeronasal organ (anterior block) showing congestion.

Figure 6.—Rabbit's nose treated with Allergan for 30 days. Section through maxillary sinus (posterior block) showing slight necrosis and desquamation.

Figure 7.—Rabbit's nose treated with Pyribenzamine.® Section through maxillary sinus (posterior block) showing slight necrosis and round cell infiltration.

Pyribenzamine, probably because of its use alone —that is, without any vasoconstrictive agent—was the least harmful in the animals. It has been observed to cause considerable pain and discomfort in patients and to be the least effective for relief of congestion since it contains no vasoconstrictive agent.

Allergan caused more damage than did Pyribenzamine in the nasal mucosa of rabbits, but considerably less than Antistine-Privine. So far as amount of injury in the animals was concerned, there seemed little choice between the use of Allergan three times a day for 14 days and its use twice a day for 30 days. Allergan has not been observed by the author to be irritating to any degree in patients with nasal allergic disease unaccompanied by acute infection, and it has been noted to be the least irritating of these three antihistaminic solutions in nasal allergic disease complicated by infection. The author has used Allergan for simple nasal instillation, for administration by the aerosol method, and, in half strength solution with normal saline solution, for the Proetz displacement procedure.

All antihistaminics are, of course, contraindicated for the occasional patient who proves to be sensitive to such drugs.

1930 Wilshire Boulevard.

Penicillin as an Etiologic Factor in Ectopic Pregnancy

Leon Krohn, M.D., *Los Angeles*

SUMMARY

Among patients observed in private practice the incidence of ectopic pregnancy trebled after the advent of penicillin therapy in the treatment of chronic pelvic inflammatory disease. In seven of eleven cases of ectopic pregnancy in a two-year period, the patients had had penicillin therapy previously. A probable explanation is that in cases in which the fallopian tube is closed by inflammation, it reopens following penicillin therapy but, because of residual damage, the ovum may not descend to the uterine cavity and is impregnated in the tube.

IT is well known that any factor which will delay or prevent the passage of a fertilized egg into the uterine cavity may result in tubal pregnancy.[2] The normal tube is a highly variable, contractile organ lined with ciliated epithelium and not simply a canal which is either open or closed. The most common condition which alters tubal function is chronic inflammatory disease, notably that of gonorrheal origin, although postabortal and puerperal infections may likewise be concerned.[2] The role played by inflammatory disease is most apt to be a mechanical one, through narrowing or obliteration of the lumen, or through production of blind alleys as a result of agglutination of adjacent tubal folds. Peritubal inflammation with angulation or constriction produced by adhesions is another factor which may disturb normal tubal function. Aside from the purely mechanical role which inflammation may play, it may be responsible for pronounced impairment of ciliary activity and muscular peristaltic activity, with resulting retardation of the progress of the fertilized egg along a damaged but patent tube.

The clinical course of patients with infections of the female pelvis has radically changed since the advent of antibiotics, particularly penicillin. In most cases, acute salpingitis and acute postabortal infections, if treated early with penicillin, cause little or no residual damage. Thus, the incidence of sterility following these infections has been reduced considerably. The use of penicillin has also yielded very gratifying results in chronic infections of the pelvis. Several years ago the author reported results in the treatment of a series of patients with chronic endocervicitis with the intramuscular use of penicillin in oil and beeswax and later the more refined penicillin in oil.[1] The results were remarkable; 94.5 per cent of patients had definite improvement. More recently the response to this treatment, while still good, has not been as dramatic. It is believed that this is because penicillin-resistant strains are developing in many patients as a result of widespread use of the drug. Since chronic endocervicitis is the most common cause of sterility[3] in the female it naturally follows that many patients who are infertile might become pregnant as the result of this therapy (in the author's series, 51 per cent). It is also well known that many patients with chronic cervicitis also have associated chronic parametritis and salpingo-oophoritis, which in many instances respond to some extent to the penicillin therapy. In some cases in which the tubes were closed before penicillin therapy, tubal patency was observed after treatment with the drug. Simultaneously with these observations on the effects of penicillin, the author became aware of an increasing number of cases of ectopic pregnancy among the patients observed.

As was previously mentioned, residual damage to the tubal epithelium with impairment of ciliary activity or changes in the muscularis or serosal surface of the tube may interfere with peristaltic activity, retard the progress of a fertilized egg, and lead to ectopic pregnancy. It is conceivable that improvement following penicillin therapy may result in reopening a non-patent tube while considerable residual damage remains. In such circumstances it would be possible for a sperm to traverse the length of the tube on its own power and fertilize an egg which had not descended to the uterine cavity because normal tubal peristalsis and ciliary action were lacking. With these facts in mind, the cases of ectopic pregnancy which were observed during the years 1949 and 1950 were studied.

Eleven cases of ectopic pregnancy were observed in private practice in that period. Seven of the patients had had penicillin therapy prior to the development of the ectopic pregnancy. During the two years in which the 11 cases of ectopic pregnancy occurred, 750 patients with intra-uterine pregnancy were treated. Thus the ratio of ectopic to intra-uterine pregnancy was 1:68. In reviewing two years (1940 and 1941) prior to the advent of penicillin, it was noted that there were only two cases of ectopic pregnancy as compared with 415 intra-uterine pregnancies, or a ratio of 1:207. This more closely approaches the incidence of 1:300 reported by Schumann[4] in 1921. In checking records of ectopic pregnancy in which operation was done by other members of the staff of the hospital used by the author, it was noted that there were four additional cases in which the patient had received penicillin therapy prior to the development of the

Chairman's address, presented before the Section on Obstetrics and Gynecology at the 80th Annual Session of the California Medical Association, Los Angeles, May 13-16, 1951.

TABLE 1.—*Data on Patients with Ectopic Pregnancy*

Case No.	Age	Para	Gravida	Duration of Sterility	Period Between Last Penicillin and Ectopic Pregnancy	Associated Pathologic Conditions
1.	30	I	I	3½ years	7 weeks	Bilateral salpingo-oophoritis
2.	31	I	I	5 years	5 weeks	Bilateral salpingo-oophoritis
3.	38	I	II	9 months	12 weeks	Bilateral salpingo-oophoritis
4.	33	0	I	12 years	23 months	Postabortal parametritis and salpingitis
5.	26	I	I	?	3 weeks	Parametritis
6.	27	0	0	6 years	3 years	Parametritis and bilateral salpingitis
7.	18	0	0	8½ months	2 months	Bilateral salpingitis
8.	26	0	I	9 years	9 months	Bilateral salpingo-oophoritis and syphilis under treatment
9.	27	0	II	10 years	6 months	Right salpingo-oophoritis and arrested syphilis
10.	34	I	III	?	4 months	Left salpingo-oophoritis
11.	34	0	I	?	3 months	Bilateral salpingitis

Note: In cases 1 to 7 inclusive, operation was done by the author; in cases 8 to 11 inclusive, by other staff members in same hospital.

ectopic pregnancy and in which penicillin might have been an etiologic factor. During the two years 1940 and 1941, there were 25 patients with ectopic pregnancy operated upon at the Cedars of Lebanon Hospital, as compared with 36 in 1949 and 1950. It is interesting to note that the incidence of spontaneous abortion in patients observed in private practice was little changed. In the years 1940 and 1941 approximately one in nine pregnancies ended in spontaneous abortion, whereas during 1949 and 1950 the incidence was approximately one in ten.

DISCUSSION

In considering the overall picture, the author believes that the advantages of penicillin therapy in pelvic inflammatory disease considerably outweigh the disadvantages. The number of undesirable penicillin reactions has been greatly reduced with the refinements of the present-day preparations. The number of patients who have been spared operation or invalidism by penicillin therapy is gratifying. Many women who might never have conceived without the benefits of penicillin now have children. The incidence of sterility following acute salpingitis, postabortal and puerperal infections is much lower now than it was in the era before antibiotics. However, the results of the present investigation should caution physicians to be on the alert for ectopic pregnancy in patients with pelvic inflammatory disease who have received penicillin for any reason.

6222 Wilshire Boulevard.

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Some Viewpoints on Child Psychiatry

Forrest N. Anderson, M.D., *Van Nuys*

SUMMARY

There is a great tendency in recent years to seek psychiatric answers to well-nigh all kinds of child problems. This tendency is seriously questioned. The average child has splendid capacities to solve his own growth problems, within the limits of home, school, neighborhood. Evidence accumulates that the average parent who seeks counsel has done a rather respectable job; that in his fear of setting limits because of "how the child will feel," there is more of psychological threat to the child than in daring to comfortably move ahead and make some mistakes.

Psychiatric treatment of a child implies that the child is unable to meet situations as adequately as other children. Such treatment should be reserved, in the main, for use in situations in which the psychiatrist and parents are willing to underwrite the implications of treatment. Treatment aimed at the vague goal of making the child "happier" is dubious. Treatment by a psychiatrist is presumably medical treatment and carries with it the advantages and disadvantages inherent in this fact. When given without carefully defining the reasons for it and the goals at which it is aimed, within medical framework, it is potentially an undesirable procedure.

THERE are no widely accepted criteria of results in child psychiatry. This is inevitable in the complex field of human behavior, where knowledge is scanty and probably superficial. It is also inevitable because there are no clearly agreed purposes or objectives, except in most general terms. Yet we go on working with children's problems, and in so doing we indicate we think it is worthwhile. We must ask questions, appraise, check. If we regard child psychiatry as a part of medicine we have to apply medical criteria.

First of all I want to state that the average American child, as I see him in clinic or office, is a rather competent young organism. He has many problems: those of eating, dressing, going to school, getting on with siblings or peers; he has the problems of feelings, attitudes, relationships. In a sense these problems are his "needs"—are the circumstances of his physical and personal environment that demand his problem-solving attention. But I no longer leap to the conclusion that he must be taken on a psychiatrically conducted tour through this maze, lest he be lost or overwhelmed. He has a considerable capacity to digest these need situations that confront him; in so doing he creates the physical-personality structure that moves him on to the next series of problem-solving demands. None of us knows just what this *is*; call it "growth," or "Nature." The point is: The child ordinarily does what is demanded by the situation.

And right here is where I discovered that "need" is a term unwittingly calculated to call out the big-brother, protective attitudes in the well-intentioned adult. America cares for its "needy": children appear to shower us with their "needs." Or do they? Perhaps it is not so much their insistence on our meeting their needs as it is a case of our meeting our own needs in the well-known projective mechanism of finding the need in someone else. "Meeting children's needs" sounds so splendid; it affords exceedingly interesting values to the need-meeter. I failed completely, for years, to see the dangers implicit in the concept.

What is the nature of these dangers? Well, it easily leads to odious "understanding" spelled with capitals. It easily leads to deprecation and derogation of children; it easily leads to the actuality of acting toward the child as if he were unable to solve his problems. To question the concept can easily lead to the accusation of being callous to the feelings of children. The more I ponder it the more I realize how subtly it deflects thinking.

There are undesirable parents; I have seen some of them. They are not as numerous as I formerly thought. In the area of complete voluntariness (to which area I am confining myself) it is probable that most parents who seriously consult the psychiatrist are, by so doing, testifying to being somewhat concerned. Such a parent is very often troubled by the matter of his emotional value to his child. He feels that what he has done or not done is wrong—that much of the symptom is an evolution from ill-doing by him, the parent.

In my earlier days I routinely tended to agree with the parent; after all, he diagnosed not only the nature but the "cause" of the difficulty. The physician, like other people, desires pegs and pigeonholes. Furthermore, the statements made by the parent fell in with the physician's "need" to see his patient as the product of forces operating "on" him. He had learned it is not proper to be critical of a person with symptoms; the child had symptoms. I as a physician followed this course; I found that my confreres did likewise. Eventually it began to dawn on some of us that we were "blaming," just as much as if we had been critical of the child; we

Presented before the Section on Psychiatry and Neurology at the 80th Annual Session of the California Medical Association, Los Angeles, May 13-16, 1951.

simply hadn't been taught to be equally chary of criticism of someone else unless we were likewise cognizant of the implications of this criticism.

So I listened to, and honestly expressed, such cliches as, "There are no problem children, only problem parents"; "No child a psychiatric case except by reason of maladjusted parents," and others ad voluminem. Out of all this I imbibed the concepts of childhood "insecurity," "feelings of rejection," etc. I achieved greater "security" for myself by showing to the parent the unwisdom of what he had done. Kindly realize I am not meaning to indicate I forthwith crudely struck at the parent with open hostility. It was far more subtle than that; it was an attitude. And then some of us began to sense that these terms are very high orders of abstraction. They perhaps denominate feelings that exist, but who can define them, who measure them, who say with certainty that a normal child should have no "insecurity"?

The questions that flood over one when he tries to give "security" and "rejection" local habitation and description, are numerous and disquieting. These are terms applying to complex intangibles; they are charged with psychological dynamite; they are bandied about by psychiatrists and ancillary workers as though they had verifiable solidity. Try pinning each of ten mental hygienists down to criteria of such terms that are usable by each of the other nine. (The answers I have obtained condense to: "Well, I have a clear idea of what I mean by the term.")

To return to the parent consulting me: He knows how he feels—that he is anxious—but he does not know what I do concerning the underlying physiopsychologic or pathologic condition. For unless I know more of this than he does, he is wasting time, effort and money with me. Patients have symptoms; physicians make diagnoses. The parent informs the psychiatrist of the multiplicity of destructive results he has "caused"—unhappiness, nervousness, insecurity. Whether these be facts upon which *I* stand depends on what *I* evaluate. There is no escape from this. To be sure, these feelings are real to the parent and as such we accept them; that is very different from the fact of my appraisal of his recital—of my diagnosis.

As I listen to the parent, I begin to ask myself, "Is the child who is being described incompetent or ill?"; "Does the child need medical treatment?" I try to function as a physician taking down the facts, including feelings, as they are presented by the one stating the problem. I ask questions and I carry out procedures that I have evolved, in my attempts to make sense out of the case before me.

I try something of the same kind with the child himself, when I see him. I try to clinically "cross-section" the child at the levels designated — physique, nervous system, intellect, character, capacity to relate, etc. Sometimes I need accessory studies. I try to keep in mind clearly: What manner of child is this before me? How well can he perform? How closely does he approximate others of his age and status in over-all adequacy? Through the years the physician learns some techniques of helpful appraisal on feelings and life experiences. All this is most important but not germane here. What I regard as germane here is: What are the reasonable goalposts on which the physician may focus his sights? What goals are medically sensible and attainable? And what goals reside predominantly in the feelings of the psychiatrist?

Through such searchings I came to realize that medicine, and psychiatry as a branch thereof, have very inept measuring rods as to the underlying feelings of the child. The evidence for this statement lies in the vast variety of interpretations of feelings as portrayed in books, journals, and by speakers. Such measuring rods simply do not exist in the sense of widely accepted, uniform standards. An examiner can declare a child is "rejected" or "unhappy." But if a listener chooses to challenge for the evidence, usually nothing but argument or chaos ensues.

Constantly I note that psychiatrists and their ancillaries make statements such as, "I feel such and such is the situation with John." Now, the concept "I feel" is very good for certain areas; I have doubts of it as a valid scientific instrument. It is a term of so-called infinite value. If I feel that you are insecure, all either of us knows for sure is that I feel you are insecure. Yet our records are abundant with this kind of statement—statements that appear to be full of significance, and that often result in significant management for the patient. And yet the statements are inherently devoid of meaningfulness about the patient; they are full of meaningfulness about the examiner. There is no way for my feeling to measure your emotional status.

But medicine, and psychiatry as a branch of medicine, do have widely accepted measuring rods for competency, or performance. I do not refer primarily to the intelligence quotient. There are physical and neurological examinations, x-ray examination, psychological tests, school appraisals, etc. Above all, there is the day-by-day performance of the individual in question. What a person does can be seen and measured with an approximation of objectivity; how a person feels is fluid, elusive, not directly observable or get-at-able.

When I explore in this manner I begin to think: If this is true, then it must be something approaching "normal." I do not know what normal is; but I have blueprints I use in everyday work against which I can project the particular case, just as other physicians have blueprints of normal hearts against which they mentally project the particular heart. Viewed against this blueprint, the child's behavior now appears different from what it formerly did. Once it was routinely viewed as psychiatric, which means medical, which means needing treatment, which means needing my assistance, which means something rather close to the situation's being my problem instead of his.

If this is the planned sequence of thinking-acting, well and good; I found it was not what I had regularly meant to do. I had not wished to remove from the child's shoulders the problem in question, unless it was too large for him. I had wished to make him more aware of his problem and have him do something about it. And the line of action which I then assumed to be correct was such that he might justifiably think that I did not think he could do what was demanded of him. For if he needed me to lift his problem, then it was too big for him, and he was not stupid if he permitted me to lift it. I am superior to him in age, judgment, experience. Or so he is supposed to think.

I desired to help the child; that was a good motive. But in so doing I often denied him the right and capacity to help himself. As a trained examiner for competence, I can judge rather well what he can do. I cannot measure his feelings. These are his property. He retains title to this property. In my acting on that fact lies my strength. Why not permit him to manage his feelings? He will, anyway. In our assumption that he can, we create in him a framework of belief in his ability. If we do not think he can, and yet leave him in the situation, we undermine him and threaten him.

This, I have come to believe, is the cardinal sin we have committed as mental hygienists in our overzeal to meet children's needs: We have attempted thought and feeling control because we have feared the child was inadequate; we have created some of the very ills we have sought to avoid. Our motives have been good, but have been based on assumptions that the child was not as equal to his task as we to ours. I now believe he is—that is, that the average child is; I am not speaking of that fraction that is inadequate. Now my job becomes, first of all, determining what are his capacities: I have much less anxiety about his not doing what children have always done. His feelings threaten me less, in accord with a rather widely accepted psychiatric dictum: As I accept the other fellow's feelings without fear or hostility, he finds that he too can accept them better.

I deprecate saying to a child with one side of the mouth that he must behave as we think he should; and then simultaneously telling him with the other side that we do not think he can. Such is confusing and even cruel. If I decide that he cannot do it alone and needs expert service, that is one thing. If I decide he can, then why buckle for him overshoes that he can buckle? If the physician who examines the throat thinks the tonsils need attention, he works on them: if he thinks they are not at fault he does not hover around with anxiety intimating that they probably are at fault.

I now wonder why I didn't see this simple state of affairs long ago. I have discovered that many parents are rather promptly able to see it. To find an otherwise intelligent parent, who can in five minutes disgorge a tremendous mixture of medicine, psychiatry, psychoanalysis, discipline, religion, love, and common-sense, and then with a bit of pressure on him to try thinking, can begin to find light in the fog, is somewhat pleasing. Parents are not nearly as stupid as I formerly thought; they often have swallowed indigestibles that we providers of the menu had not found wholly digestible ourselves—although I am not sure we were aware of that. It has been almost amazing to note how often such a parent can join into a fog-clarifying endeavor.

Now, I would not desire that a child not have available the services of a friendly doctor—if he needs them. But the questions to be answered first are these: "Does this child need a doctor?"; "Does he need treatment?"; "What are we treating him for?" If, after examining him, I think he needs my psychiatric services, I assume I shall so state. But that means I regard him as needing medical care. (And I no longer think that vague generalities about "making him happier," about "being a good father" to him, will suffice. If he has a good father, he doesn't need me; if he hasn't, my services are something other than a good father's.) The fact that his parents and I mean him well, will not suffice—we have the responsibility of deciding whether he needs a doctor. If we so decide, then the child is on sound logical ground if he regards himself as sick; and let no one say him nay, for that is what we have told him in terms so unmistakably obvious that no one but obfuscated adults could miss the point. We become entangled in the quicksands of our good intentions, which are sometimes more subtly entangling than bad intentions. This is of immense importance. Is it different from operating in acute appendicitis? If we operate, we indicate our medical conviction there is a diseased condition.

The regrettable fact is that we psychiatrists and our auxiliaries have been far from clear as to our function, our goal. As a result we have confused our roles with those of parents, teachers, ministers, recreationalists, and others. If our function is to "make him adjust" or "make him happier," I wonder wherein we as physicians have any special competence. "Happiness" and "adjustment," like "peace," are beautiful terms: We ought to be for them, and I have discovered we have been—in a rather large and uncertainly focused way.

Suppose we stick to the more traditional medical roles! Here someone will suggest "prevention." This term, too, has a ring of sanctity and science. Since any person we treat who does not immediately pass out of the picture can serve as testimony against how much worse he might have been had we not treated him, the fact seems to be we have very little unequivocal evidence on prevention. It sounds good; and those of us who have preached it have not done so maliciously. Sometimes I think our chagrin might be less if we had so done; we could have been unmasked by ourselves considerably easier. We have fallen prey to assumptions and fine motives. It is time to take stock!

Parenthetically, let me say that I have heard experienced psychiatrists suggest that when a teacher thinks a child needs psychiatric treatment, they

agree that he does. If teachers are adequate as diagnosticians in medicine, I agree. Most of the teachers I have known have been adequate—as teachers. But I know more than the teacher does about medical evaluation; it is not immodest to act as if I believed it; *I* decide if a child needs treatment. With parents much the same situation exists: They make assertions, after which, we hope, they check with their physician. The physician cannot escape the essential responsibility of the decision, and equivocations about letting the patient decide are illusory. Of course we will not force treatment on a voluntary patient—adult or child. But before we leave the decision to him, we have already decided whether we approve. If we do not think the patient should have an operation, his eagerness for one is not a valid basis for abdicating our medical criteria.

It seems to me to add up to something I might express as follows: The overt behavior of each person is always being checked by the forces outside of, or inside of, that person. Usually it is a combination of both, and we have come generally to regard the distinction between inside and outside world as more practical and artificial than natural. Overt behavior is thus always working within limits —limits or dividing lines that are either explicit or implicit. Non-overt behavior, on the other hand, is roughly synonymous with thought and feeling. Such phenomena are never subject to direct control by either the inside or outside world. Thoughts and feelings cannot be ejected by a fiat of will, or authority. They must be accepted, and in their acceptance is often the key to practical control. In our acceptance of our troubling thoughts and feelings, we deprive them of some of their fearsomeness. As parents, teachers, physicians, come to more acceptance and less fear of the feelings of the child, the child gains in assurance as to his own ability to accept and, therefore, handle. His feelings are less threatening to me and consequently less threatening to him—whether I be his parent or his doctor. In the same way, some of the feelings of the parent threaten me less; I am not so troubled by his assumed rejecting attitudes. I have learned that even "good" parents probably have these attitudes at times; they do not frighten me into prescribing psychiatric treatment. As they frighten the parent less, they frighten the child less. I do not depreciate and derogate the child's inherent ability as much as I formerly did. Whereas formerly I treated 75 per cent to 90 per cent of all children who were sent to me as needing psychiatric treatment, now I treat 25 per cent or less. Children solve problems, and one of their greatest "needs" is to have this fact recognized. I traveled many years and thousands of cases to learn what ought to be a simple truth. I mixed my motives with the child's problems and often treated my motives.

14317 Huston Street.

"Glossopharyngeal Breathing" by Paralyzed Patients

A Preliminary Report

CLARENCE W. DAIL, M.D., *Los Angeles*

SUMMARY

Several patients with poliomyelitic paralysis of the muscles used in normal breathing learned a method of breathing consisting of pumping air into the lungs by action of the mouth, cheeks, tongue, pharynx and larynx.

The advantages of the method are that the patient can be out of the respirator and on a conventional bed for longer periods, can talk longer and louder, is more easily cared for, and is better able to engage in interesting occupations.

AN unusual kind of respiratory action is practiced by several patients at Rancho Los Amigos who have pronounced poliomyelitic impairment of the respiratory muscles and who, except by this kind of breathing, have a very low vital capacity and limited ability to breathe without artificial means.

From the Poliomyelitis Service of Rancho Los Amigos, Hondo, California.

Visiting consultant in Physical Medicine, Rancho Los Amigos, Hondo, California, and Associate Professor of Therapeutics, College of Medical Evangelists, Los Angeles.

Very similar to the lung breathing used by most amphibia including frogs and toads, it consists of trapping a small amount of air in the mouth and throat and then forcing it through the larynx by action of the tongue and pharynx and sometimes of the cheeks. The air is then held in the lungs by closure of the larynx while the mouth and pharynx are again filled with air, which again is forced into the lungs. This is repeated about a dozen times until the lungs are quite filled. The air in the lungs is then emptied, usually through the partly closed lips. This is repeated continuously with a respiratory rate of about six per minute. The terms "glossopharyngeal breathing" and "frog breathing" seem to be quite appropriate for brief description.

Several of the patients discovered this method of breathing without help or even suggestion that it was possible. Others learned from them. Several of the patients who breathe in this manner are able now to be out of the respirator for several hours.

TABLE 1.—*Data on Glossopharyngeal Breathing (15 Patients)*

Patient No.	Age, Sex	Onset of Paralysis	Date GPB* Started	Approximate Vital Capacity: Without GPB	Approximate Vital Capacity: With GPB	Time Out of Respirator (As of June 1, 1950): Without GPB	Time Out of Respirator (As of June 1, 1950): With GPB	Remarks
1	29M	5-9-44	About '46	150	600	Not known	All day	Died 1-30-49
2	25F	8-10-49	10-12-50	100	1,000	25 min.	2 hrs.	
3	37F	6-25-48	9-21-50	200	815	25 min.	2 hrs.	
4	29F	10-24-49	10-12-50	200	1,710	2 min.	3 hrs.	
5	28M	11-10-48	9-13-50	100	1,150	2 min.	1 hr.	
6	29M	11-7-50	2-15-50	10±	1,200	Not out	1½ min.	
7	21M	8-7-49	1950	1,500	2,700	†		
8	17M	10-10-48	April '49	500	1,500	†		
9	20M	8-29-48	May '50	600	1,600	†		Practicing only.
10	39F	11-15-48	9-22-50	100	300	1 min.	1 min.	Not yet learned.
11	24M	9-3-50	2-13-50	200	.....	1 min.	1 min.	
12	44M	10-10-49	10-27-50	0	.....	1 min.	1 min.	
13	24F	5-29-50	11-14-50	150	.....	1 min.	1 min.	
14	25M	9-17-48	10-3-50	0	.....	1 min.	1 min.	
15	4?F	8-2-43	May '51	500	900	All day	.....	Does most of breathing with neck muscles

*GPB=Glossopharyngeal breathing.
†Did not need to resort to glossopharyngeal breathing.

Additional comment: It is noteworthy that Patient No. 6 has very low vital capacity. Patients 7, 8 and 9 are able to "frog-breathe" successfully but do not need to. Patients 8 and 9 stated that at one time they were able to talk more loudly when they were using "frog breathing" than they could otherwise. Patients 10 to 14 had not learned the technique at the time of this report, although all had been practicing for some time. Patient No. 1, although he died, probably from chronic anoxia, mastered the technique of "frog breathing" and was able to remain out of the respirator during the daytime. Patient No. 15 does not need it for breathing unless it might be used as an alternative, since she breathes mostly with accessory muscles in the neck.

They can be placed on a regular bed, which facilitates nursing care, physical therapy and occupation, and improves their morale. They are able to talk much louder and longer on one breath, and they are better able to cough up mucus.

Nine ventilation measurements were done on four adult patients (Patients 2 to 5, Table 1) who used this form of breathing. The average amount of air forced into the lungs at each pumping action of the tongue and mouth was 58.7 cc. The average volume of a single breath was 713 cc. The average number of breaths per minute was 6.1 and the average volume of ventilation per minute was 3,761 cc.

This volume of ventilation was low in comparison with the average volume of 6,848 cc. per minute produced for these patients by the respirator operating at the rate and capacity to which the patients were accustomed (average tidal air of 428 cc. and average rate of 16 per minute). Some of the difference in volume—possibly 1,000 cc. of it—may be offset by the better quality of the air breathed by the glossopharyngeal method, since there is less rebreathing of air in the dead air space with deep slow breathing than with shallow rapid breathing. It is possible also that there is better absorption of oxygen because of positive intrapulmonary pressure achieved in glossopharyngeal breathing.

Attempts at instruction have been almost entirely from patient to patient. Since many patients could receive great benefit, better means of instruction should be developed.

Adequate strength of the participating muscles, those of the larynx, pharynx, soft palate, tongue and cheeks and mouth, is of course necessary. Care should be taken that this method of breathing is not overdone in the presence of inadequacy. There should be no undue fatigue which may lead to anoxia. To permit time for practice, artificial respiration should be stopped several times daily, for not more than a minute at a time at first but for gradually extended periods as the patient improves in technique. The volume of ventilation per minute should be measured before the patient is able to breathe more than about ten minutes.

312 North Boyle Street.

CASE REPORTS

- Renal Hemangioma
- Aberrant Pancreatic Tissue in the Gastric Wall
- Rectal Hemorrhage Caused by Injection Slough

Renal Hemangioma

EARL F. NATION, M.D., *Pasadena*

RENAL hemangioma is a rare lesion which usually is not properly diagnosed until operation for removal of the affected kidney because of suspected carcinoma. Most such tumors are benign, as in the case here reported.

REPORT OF A CASE

A 48-year-old housewife entered the Huntington Memorial Hospital June 11, 1950. Gross hematuria had occurred a month previously and an abdominal tumor had been palpated in the region of the right kidney. Thyroidectomy for adenocarcinoma had been done three months before admission.

Upon physical examination it was noted that the right kidney was easily palpable and apparently enlarged. Results of routine examination of the urine and blood were within normal limits.

In a cystoscopic examination no abnormality was observed in the bladder and renal function was good bilaterally. What appeared to be a tumor involving the lower pole of the right kidney was noted in pyelographic studies.

At operation a firm, nodular, spherical tumor protruding from the lower pole of the right kidney was observed. The overlying fat and other tissues were not adherent to the lesion. One large vein extended into the tumor. Since primary or secondary carcinoma of the kidney was suspected, nephrectomy was carried out. Convalescence was uneventful and the patient left the hospital on the ninth postoperative day.

PATHOLOGIC REPORT

The specimen was an entire right kidney including the entire renal pelvis and a 4.5-cm. segment of ureter and a portion of renal vessels, an adherent tumor mass and a thick layer of perirenal fat having a combined weight of 378 gm. and measuring 17.5x7.3x5.8 cm. (Figure 1). The kidney and tumor mass together weiged 290 gm. The kidney was of normal size and the attached tumor mass was 7.5x5.5x5.3 cm. in its greatest dimensions. The layer of perirenal fat which surrounded almost all portions of the specimen, including the tumor mass, varied from 2 to 11 mm. in thickness. Easily dissected from the kidney and the tumor, it weighed 88 gm. On cut surfaces of the tumor were numerous large cavernous spaces varying from 2 to fully 16 mm. in diameter. Abundant amounts of purple-red blood oozed from them. A distinct fibrous capsule averaging 1 mm. in thickness was present in all portions. In some areas the capsule was greatly thinned and small dark purple-red nodules varying from 2 to 7 mm. across were easily seen beneath the thin layer of pink-gray connective tissue constituting the capsule. The capsule of the mass was adherent to the parenchyma of the kidney, firmly in some places and loosely in others. There was pronounced thinning of the parenchyma of the lower pole, apparently caused by pressure from the mass, so that the capsule lay adjacent to the inferior major calyx over an area 1.3 cm. across. Elsewhere the renal parenchyma was pale tan with fairly good cortical-medullary differentiation. The capsule was stripped with ease. The renal pelvis and calyces appeared to be essentially normal. No abnormality was noted in the segment of ureter, and there were no thrombi or emboli in the renal arteries and veins. Only a few vessels were observed in the capsule of the tumor, and no abnormality was noted in them. There was no major vascular trunk entering the mass from the extrarenal side.

In microscopic examination of sections of the tumor, the capsule was observed to be very thick. Portions of the capsule were dense and hyaline. In one area there was ossification, and spicules of bone with fatty marrow formation were noted. A broad band of connective tissue separated the tumor from the adjacent renal parenchyma. In all of several sections that were examined there were large numbers of vascular spaces, many of them one to several millimeters across while others were smaller. In some areas groups of capillary-sized channels were present. Many of the vascular channels were widely distended with blood. In some of them there was a layer of thin endothelial cells but in others the cells were considerably swollen and contained vacuolated cytoplasm, apparently due to content of fat. The endothelial cells, in some places, somewhat resembled epithelium. Varying amounts of connective tissue were present in various parts of the growth, and in some areas broad strands of dense connective tissue were present. There were large numbers of hemosiderin-filled macrophages in most of the connective tissue, and in some areas many round cells were present. In other parts the stroma was rather fine and only thin strands separated the blood vessels. There was no evidence of malignant change. The structure of the parenchyma of the kidney was essentially normal, with only an occasional minute scar, chiefly under the capsule. In two sections taken specifically through the border of the tumor and the kidney, the capsule of the kidney was observed to be continuous over the tumor; the growth obviously arose from within the renal substance (Figure 2).

Diagnosis: Benign hemangioma of the kidney.

DISCUSSION

The incidence of renal hemangioma is not altogether clear. Riley and Swan,[9] in 1941, reported a case and made note of 36 others in the literature. White and Braunstein,[10] in 1946, reported a case and stated that there were reports of 42 cases

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Figure 1.—Right kidney with hemangioma and attached perirenal tissue.

in the literature. Lazarus and Marks,[7] in an exhaustive report on the subject in 1947, noted reports of 70 cases in the literature. Butt and Perry,[2] in 1951, on the other hand, placed the number of cases in the literature at 55.

Thus, while the exact number of reported cases is moot, the condition is patently rare. This is further borne out in the fact that the lesion was not observed in 13,219 necropsies at Boston City Hospital[9] and only one such tumor was noted in 30,000 necropsies in the department of pathology at the University of Minnesota.[1]

Some of the confusion can be attributed to the variety of terms used to describe renal vascular tumors. They have been called nevi, varices, telangiectases, angiomas, and capillary, plexiform and cavernous hemangiomas. Lazarus and Marks[7] expressed the opinion that the terms designate various stages of a single variety of benign vascular tumor. Jacobs and Rosenberg[6] described renal telangiectases, or hemangioma simplex, as vascular enlargement resulting from dilation to distinguish it from angioma, which is angioblastic in origin and has neoplastic tendencies.

Lazarus and Marks noted in reviewing the literature that 57.7 per cent of the patients were males. The youngest patient was four days old, the eldest 66 years. In 85 per cent of cases, the presence of the lesion became manifest before the age of 40. The incidence was about equally divided between the right kidney and the left. Hematuria was the primary symptom in over 95 per cent of cases. In the reported cases symptoms had been present for from one day to 36 years.

The diagnosis of hemangioma is seldom made preoperatively. There are no characteristic deformities observable in pyelograms. Gross hematuria from one kidney without other demonstrable cause, with little or no pyelographic evidence of deformity, should always suggest the possibility of renal hemangioma, particularly if the patient is under 40 years of age.

The treatment in all but one of the reported cases of true

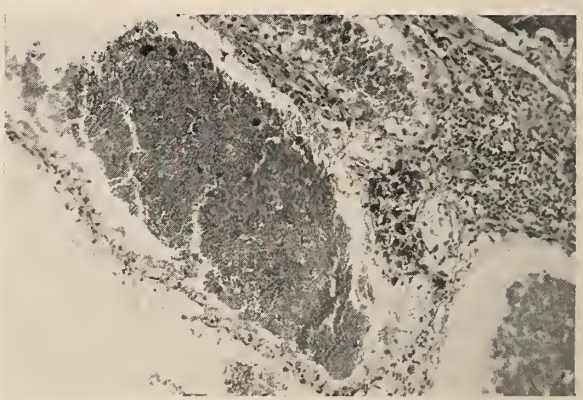

Figure 2.—Low-power photomicrograph of portion of hemangioma. Note the large vascular spaces and dense strands of connective tissue infiltrated by round cells and hemosiderin-filled macrophages.

renal hemangioma was nephrectomy. Hamm[5] did partial nephrectomy in one case. The fact that only one possible case of bilateral renal hemangioma has been reported[8] gives some assurance on a statistical basis, that the other kidney probably is not involved.

SUMMARY

A case of large, encapsulated renal hemangioma is reported. This is a rare condition which usually is first manifest by hematuria, most often in persons under 40 years of age. Carcinoma of the kidney is the most common preoperative diagnosis and nephrectomy the treatment.

112 North Madison Avenue.

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Aberrant Pancreatic Tissue in the Gastric Wall

Lewis G. Jacobs, M.D., Thomas E. Richmond, M.D., and James M. Tucker, M.D.,* *Oakland*

ABERRANT pancreatic tissue has been observed in all portions of the gastrointestinal tract and in adjacent structures.[1,2,3] As this ectopic growth is fairly common, it may be suspected in the presence of certain symptoms that cannot be precisely attributed to other pathologic processes in the abdomen. Excellent surveys of the literature have been made by Faust and Mudgett,[3] Barbosa, Dockerty and Waugh,[1] and Busard and Walters.[2]

The review by Busard and Walters summarized 543 cases of ectopic growth of pancreatic tissue. These, plus the case here reported, are summarized in Table 1. The gastric wall is the site of about a quarter, the duodenal wall of another quarter, the jejunal wall of a sixth, and other locations (including 6 per cent in Meckel's diverticula) of a third. While the usual location is submucosal, involvement of the muscularis is common and of the mucosa not rare. The gross lesion is generally a polyp, either sessile or pedunculated, over which there may be a mucosal ulceration. The lesion may be asymptomatic, or it may cause symptoms of peptic ulcer, of hypoglycemia or of neoplastic disease.

Table 1.—*Sites of Growth of Aberrant Pancreatic Tissue in 544 Cases*

Location	Number	Per Cent
Wall of stomach	150	27
Wall of duodenum	159	29
Wall of jejunum	85	16
Wall of ileum	32	6
In Meckel's diverticulum	30	6
Wall of gallbladder	15	3
Miscellaneous locations	73	13
Total	544	100

The asymptomatic group is undoubtedly the largest. In many of the reported cases (and no doubt in many not reported) the condition was observed at necropsy as an incidental and unimportant finding. In various autopsy series, the incidence has averaged a little under 2 per cent. In Veterans Administration Hospital, Oakland, only one case (doubtful), other than the one here reported, was observed in 781 routine autopsies. The series reported by Barbosa and co-workers, the largest single group, consisted of 82 patients who were operated upon. In only 39 cases was there believed to be a causal relation between the aberrant pancreatic tissue and the symptoms of which the patient complained. Thus, in 43 of 82 cases in which the condition existed, it caused no symptoms—this in a series of surgical, not autopsy, cases. Of course, when asymptomatic, this condition is unimportant except insofar as it may lead to later complications; and diagnosis could only be reached through some fortuitous circumstance.

Cases in which the aberrant tissue causes an ulcer-like syndrome are perhaps the most perplexing and difficult to deal with from a clinical standpoint, since the symptoms so closely mimic those of peptic ulcer, even to the presence of severe bleeding. In x-ray examination, the secondary signs of duodenal ulcer—spasm, irritability and tenderness of the cap, but without a visible crater—may be observed. In some instances actual mucosal ulceration over the tumor may be present, as has been noted both in operative and in postmortem specimens. More often there is no ulceration. In cases in which the tumor can be observed in gastrointestinal x-ray films the problem is not so difficult of solution, but the tumor is by no means invariably demonstrated. Gastroscopy is not usually helpful, since if the tumor is sessile with intact mucosa it cannot be visualized by gastroscopy, and of course a duodenal tumor is beyond the range of this method. The radiographic appearance is not at all characteristic, since any benign tumor may have the same appearance on a film. In any case in which the symptoms of ulcer are present and there is x-ray evidence of polypoid or sessile tumor in the distal stomach or in the duodenum, with normal mucosa over it and sharp demarcation of the edges, the possibility that the tumor is a pancreatic rest should always be considered.

In cases in which the aberrant growth causes hypoglycemia, an adenoma or adenocarcinoma composed of functioning islet cells leads to hyperinsulinism with the usual clinical symptoms, of which convulsive seizures or episodes of syncope are the most striking. In such cases excision of the tumor is mandatory, and if metastatic lesions are present they should also be removed if at all possible. Tumors of this type are malignant in almost 50 per cent of cases, and later metastasis or recurrence usually causes recurrence of hypoglycemia. It is sometimes very difficult to locate the primary nodule either radiographically or surgically, as it may be anywhere in the abdomen.

Cases in which the tumor is of itself the important factor in the production of symptoms may be divided into two rather distinct subgroups—those in which the growth is malignant, and those in which it is benign. If it is malignant (probably the result of degeneration of an originally benign rest) the symptoms are those of obscure intra-

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*Dr. Tucker died February 18, 1951.

abdominal malignant disease; and except that jaundice is not often present, the course is that of pancreatic carcinoma. Although surgical excision is curative if complete, the absence of early symptoms makes it uncommon for the diagnosis to be reached in time. In cases in which the tumor is benign, its presence may be made evident by an episode of obstruction. Rarely are tumors of this order suspected on the basis of roentgenograms. The obstruction may be either partial (as with a tumor encircling the duodenum, the so-called annular pancreas) or complete (as with intussusception). The event may occur either in childhood or in adult life, but in most reported cases of pancreatic rests in children the lesion was discovered as a result of acute intussusception. In any case, the treatment is excision of the rest, with such other procedure as may be indicated.

In the following case, the symptoms were typical of those in which aberrant pancreatic tissue causes symptoms akin to those of ulcer. Although an x-ray diagnosis of duodenal ulcer plus gastric tumor was made, duodenal ulcer was not observed at operation.

REPORT OF A CASE

A 38-year-old fireman had occasional burning pain and heartburn extending up into the throat. These symptoms were first noted about 12 years previously. They occurred possibly two or three times a week up to the time the patient entered the Army. The distress was almost entirely substernal and was usually aggravated by taking coffee, greasy and fried foods, apples and fruit juices. Alka-Seltzer® and bicarbonate of soda almost always gave relief. Usually the distress began about two hours after breakfast, continued through the day, became worse about two hours after the evening meal and continued to become worse until bedtime. Rarely did gastric distress awaken the patient during the night and usually by morning it had abated. Food and milk practically never gave relief, although during the preceding few months on two or three occasions when the patient felt hungry and had some distress in the epigastrium, eating had helped. Bending forward and heavy work were liable to cause heartburn and distress with a bitter or sour taste in the mouth. There was no history of dysphagia, or of nausea or vomiting. The patient said he believed he had not lost weight. Appetite was moderate and no change in it had been noted. There was no history of icterus, melena, hematemesis, acholic stools or dark urine. After the patient was discharged from the Army (some five years before the present examination) epigastric distress was almost continuous. Chronically constipated for about 12 years, the patient often passed hard, lumpy stools. There were no episodes of diarrhea, and blood in the stools had never been noted. On several occasions in the preceding two years the patient had had fleeting and not very severe stabbing or aching pain in the right lower quadrant of the abdomen. The patient was uncertain as to whether these episodes were related to either constipation or substernal distress.

Rhinitis, apparently due to allergic reaction, had been present for several years.

Physical Examination: The patient was well developed and well nourished. There was a mild degree of tenderness in the right lower quadrant of the abdomen on the right side of the midabdomen. No masses were felt and the spleen and liver were not enlarged. There was slight varicocele on the left. In roentgen studies of the gastrointestinal tract, a filling defect 1.5 cm. in diameter in the pyloric region was noted (Figure 1). This appeared to be caused by a gastric polyp. The duodenal bulb was deformed and irregular. The roentgen diagnosis, after three gastrointestinal studies, was polypoid tumor of stomach, and duodenal ulcer, probably active. No abnormalities were noted in the heart and lungs, in a cholecystogram or in barium enema studies. Results of urinalysis were within normal limits. The cell content and sedimentation rate of the blood were normal. Results of

Figure 1.—Preoperative roentgenogram showing polypoid prepyloric tumor and irritability of the cap.

Figure 2.—Postoperative roentgenogram. The irritability of the cap is somewhat increased.

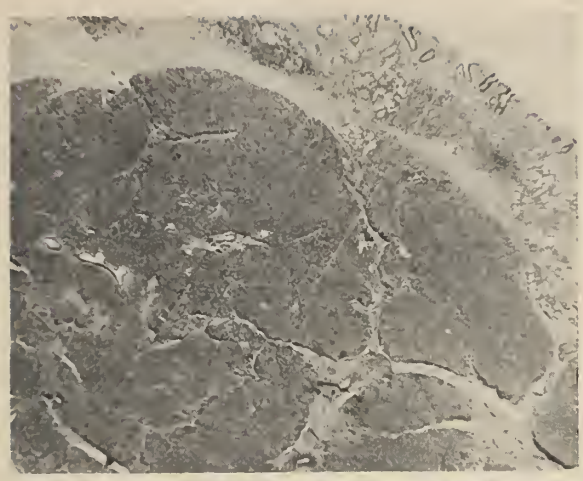

Figure 3.—Low-power photomicrograph of excised tumor.

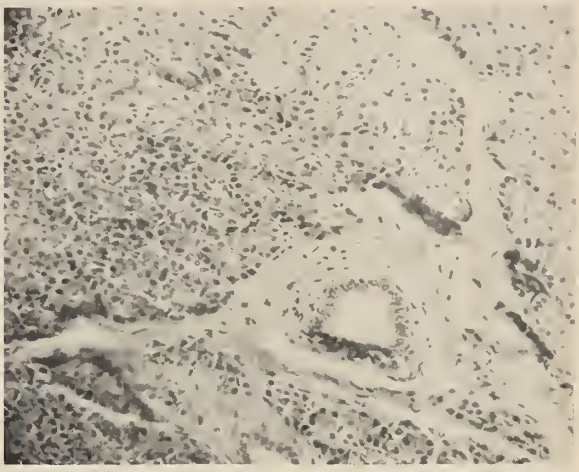

Figure 4.—High-power photomicrograph of excised tumor.

serologic tests were negative for syphilis. In gastric analysis a slight elevation of acidity, both free and total, was noted. The protein (agglutination) ratio was normal. There was a trace of blood in the stool (guaiac test).

The patient was observed in consultation in the allergy clinic and a desensitization program was begun. Gastroscopic examination was carried out on two occasions, but no tumor was visualized. In an exploratory laparotomy a polyp was noted in the lesser curvature in the prepyloric area. It was removed through an incision in the stomach. No evidence of duodenal ulcer was observed. Postoperatively the patient had a severe reaction to a blood transfusion. The pathologist reported the reaction as allergic since there was no evidence of agglutination or hemolysis. Postoperative treatment consisted of bed rest, administration of penicillin, and gradually progressive diet. No tumor tissue was visualized in postoperative x-ray films but there was evidence of continued irritation of the duodenal cap (Figure 2).

Pathologic Report: The specimen was a slightly polypoid mass of soft, rubbery connective tissue, partially covered by an intact, normal appearing mucous membrane. It was 1.2 cm. in length and from 0.6 to 1 cm. in diameter. In the central portion of the mucosa was a small pin-point umbilication. The sectioned surface was made up of a mass of soft, yellow tissue demarcated into small lobules of irregular fine strands of fibrous tissue.

Microscopically observed, the tissue was composed of an irregular, uncircumscribed mass of adult pancreatic tissue embedded within gastric submucosa which was made up predominantly of the exocrine elements with a few scattered abortive islets of Langerhans. Well defined pancreatic ducts, some of them atrophic and others dilated and semicystic, were observed. The glandular lobules were surrounded by fine hyalized fibrous tissue trabeculae. The gastric mucosa was intact but focally thin and atrophic. There were a few chronic inflammatory cells scattered throughout the subepithelial connective tissue, and, focally, pancreatic ductal tissue extended upward into the mucosa itself (Figures 3, 4).

The pathologic diagnosis was aberrant pancreatic tissue in the gastric wall.

SUMMARY

A case in which a pancreatic rest in the stomach caused an ulcer-like syndrome is reported. A roentgen diagnosis of polypoid gastric tumor with secondary signs suggesting duodenal ulcer was surgically verified as regards the tumor but not the ulcer. The case reported is typical of one of the four classifications of cases of aberrant pancreatic tissue. Certain other typical clinical syndromes are reviewed for comparison.

Veterans Administration Hospital, 13th and Harrison Streets.

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Rectal Hemorrhage Caused by Injection Slough

A Report of Two Cases

Gerald Mason Feigen, M.D., *San Francisco*

MANY clinicians have described the occurrence of bleeding as a complication of the injection treatment of hemorrhoids. There may be slight loss of blood at the time of injection, but serious hemorrhage is rare. When it occurs, it usually follows slough which causes erosion of a blood vessel. The rectum and rectosigmoid can retain a considerable amount of blood before the defecation reflex is stimulated, especially if the bleeding begins while the patient is asleep.

The following two cases are of interest because the character and the amount of the bleeding were more typical of polyp or neoplasm than of injection slough. They are presented to reemphasize the occurrence of severe bleeding as a complication of the injection treatment of hemorrhoids.

Case 1. A 39-year-old white woman was observed in the office following the passage of a large amount of blood from the rectum. Most of the blood was in the form of dark clots, but some of it was bright red and uncoagulated. The patient said that for many years she had been treated for "spastic

From the Department of Proctology, Division of Surgery, Mount Zion Hospital, San Francisco.

colitis" which was said to produce cramps and frequent attacks of diarrhea. The patient related the present hemorrhage to this disease. In 1941 hemorrhoidectomy was done in another city, and subsequently injections were given several times a year for "slight recurrences." The last injection was given by a physician in another city 12 days before the present hemorrhage.

On digital examination the soft firm edges of an ulcer were palpated in the right anterior area of the rectum. In proctoscopic examination it was noted that the rectum contained many clots, and some liquid blood. The clots were observed up to the 25 cm. level, and seemed to be coming from above. The bowel was cleansed by means of suction and cotton applicators, and in the right anterior, just above the mucocutaneous line, was an ulcer, 1 cm. in length, and about 7 mm. in width, apparently an injection slough. Moderate bleeding from the center of the lesion was easily controlled with light coagulation therapy. The patient was hospitalized for observation. In a barium enema and air contrast studies the colon appeared to be normal. No abnormalities were noted in x-ray studies of the stomach, esophagus, and duodenum. There was no further bleeding and the patient was discharged from the hospital after five days. The rectal ulcer healed in two weeks.

* * *

Case 2. A 39-year-old white man, observed in the office, stated that he had passed a large amount of blood from the rectum during the night and had fainted. The blood, he said, was a mixture of clots and uncoagulated bright red liquid. The patient ascribed the hemorrhage to bleeding hemorrhoids which had started to bleed six months previously. Three injections of the hemorrhoids had been carried out by another physician. The last injection, three weeks previously, had been attended with severe pain which lasted for three days.

Upon digital examination, an indurated area with raised edges was palpated in the right anterior area of the rectum. In a proctoscopic examination many fairly large clots were observed in the rectum and rectosigmoid up to the 25 cm. level, and dark liquid blood was coming from above that level. After the bowel was cleansed by suction and swabbing with cotton applicators, an ulcer 9 x 6 mm. was observed just to the right of the anterior mid-line and just above the mucocutaneous line. There was only slight bleeding from the center of the ulcer and it was easily controlled with pressure applied with a thrombin-dipped applicator.

A non-residue diet and a lubricant were prescribed and the patient was told to report any further bleeding. Upon examination three weeks later the ulcer was observed to be healed. In barium enema with air contrast studies carried out two months later, no evidence of polyp or other cause of bleeding from the large bowel was noted. When the patient was last observed there were moderate-sized internal hemorrhoids which seemed to be asymptomatic.

DISCUSSION

Attempts to determine the amount and the kind of solution used in the injection treatment in the two cases here reported were unsuccessful. Slough is usually caused by injecting the solution too superficially or by injecting too large an amount at one site. The pain attending the injection (Case 2) would indicate that the injection was given too close to the mucocutaneous line.

It is of interest that neither patient volunteered the information that an injection had been given and neither related the bleeding to the injection. In a case of moderately severe rectal bleeding, therefore, the patient should be questioned about having received injection therapy, and injection slough should be considered as a possible cause. The lesion is so near the anal canal that it can be missed in proctoscopy. It is not always palpable. There may be so much retrograde accumulation of blood that clots are observable up to and above the rectosigmoid level, thereby distracting the attention of the examiner from the mucocutaneous line.

SUMMARY

Two cases of moderately severe rectal hemorrhage caused by post-injection slough are reported. Neither patient related the bleeding to the injection. This condition should be considered as a possible cause, in cases of rectal hemorrhage, even though clots are observed higher in the bowel.

2000 Van Ness Avenue.

California MEDICINE

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Editor, DWIGHT L. WILBUR, M.D. *Assistant to the Editor*, ROBERT F. EDWARDS

Editorial Executive Committee

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For Information on Preparation of Manuscript, See Advertising Page 2

EDITORIAL

C.M.A. Constitution and By-Laws

Printed in this issue are the new Constitution and By-Laws of the California Medical Association. These documents were voted into existence at the Annual Session in May 1951.

The new documents provide various changes in the method of election of members of the Council. They also bring out a new form of representation of the county medical societies in the House of Delegates and provide several organizational changes from the former documents.

The C.M.A. Council, under the new Constitution, will include Councilors of 11, rather than the former nine. Councilor Districts. The new Councilors will be elected by the delegates from their own districts, rather than by the House of Delegates as a whole. but the right of any District Councilor to serve may be challenged by any delegate in the House of Delegates. Councilors-at-large are elected as formerly, with not more than two of the six to be elected from any Councilor District.

In the House of Delegates, provision has been made for only elected delegates and their corresponding alternates to be officially seated. Each county society will hereafter be represented by a minimum of two delegates; the former Constitution placed the minimum at one.

Another important change from the old Constitution and By-Laws lies in the provision for holding two meetings of the House of Delegates each year. Under this provision plans have already been made for the interim session of the House of Delegates to meet in San Francisco on December 1 and 2, 1951. This will be the initial session of this type and it is expected that the business of the Association and of California Physicians' Service will be greatly expedited by the additional time available for consideration of the problems coming before the House.

All members of the Association are urged to read these new articles and to keep them for future reference. They establish the method under which the Association is formed and operated, and every member should gain for himself a full understanding of their provisions.

In contemplating the new Constitution and By-Laws it is easy to forget the tremendous amount of time and work which has gone into their making. When the interests of close to 11,000 members and 39 county medical societies must be considered, when the various geographical and population factors are given adequate weight, it is apparent that the drafting of official governing documents is no easy task. Two committees of the House of Delegates labored for two years to produce the draft of the present regulations, and then a period of one year elapsed before they were brought up for vote. Even then, several amendments were incorporated in the new By-Laws after the basic rules had been approved by the House of Delegates.

Now lying on the table, awaiting consideration at the 1952 Annual Session, are several proposed amendments to the Constitution. This is evidence of the fact that not all members of the Association were completely happy with the documents adopted this year. The views of such members will be given full consideration in next year's meeting.

The new Constitution and By-Laws supplant earlier documents adopted in 1935 and amended in many particulars since that time. The new articles are designed to eliminate faulty and cumbersome provisions in the earlier version and to bring the governing articles of the Association in line with current needs and conditions.

Every member of the California Medical Association has a direct stake in the provisions of the new articles, both as to their effect on himself and on his own county medical society. The pages carrying these provisions should be studied by all.

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JOHN HUNTON, Executive Secretary.....General Office, 450 Sutter Street, San Francisco 8
ED CLANCY, Field Secretary.....Southern California Office, 417 South Hill Street, Los Angeles 13, Phone: MAdison 8863

NOTICES AND REPORTS

Council Meeting Minutes

Tentative Draft: Minutes of the 384th Meeting of the Council of the California Medical Association, San Francisco, June 24, 1951.

The meeting was called to order by Chairman Shipman in Room 210 of the St. Francis Hotel, San Francisco, at 9:30 a.m., Sunday, June 24, 1951.

Roll Call:

Present were President MacLean, President-Elect Alesen, Vice-Speaker Randel, Councilors Shipman, Ball, Loos, Sampson, Morrison, Dau, Ray, Lum, Green, Pollock, Frees, Thompson, Bailey, Varden, Heron, Montgomery, and Secretary Daniels. Absent for cause: Speaker Charnock, Councilor West and Editor Wilbur.

Present by invitation were Executive Secretary Hunton, Legal Counsel Hassard, Assistant Executive Secretary Thomas, Legislative Chairman Dr. Dwight H. Murray, Dr. Francis T. Hodges and Mr. William Bowman of C.P.S., county society executive secretaries Glenn Gillette of Fresno, William Tobitt of Orange, Robert L. Wood of San Mateo, Joseph Donovan of Santa Clara, Public Relations Counsel Clem Whitaker, Jr., and Ned Burman.

Present by invitation during parts of the meeting were Dr. Edwin L. Bruck and John B. Benediktson, D.D.S., of the California State Dental Association.

A quorum present and acting.

1. *Minutes for Approval:*

(a) On motion duly made and seconded in each instance, minutes of the Council meetings of May 12 to 16, inclusive, 1951, Nos. 379 to 383, inclusive, were approved.

(b) On motion duly made and seconded, minutes of the 226th meeting of the Executive Committee, held May 16, 1951, were approved.

2. *Membership:*

(a) A report of membership as of June 22, 1951, was received and ordered filed.

(b) On motion duly made and seconded, all members whose 1951 dues had been received since May 16, 1951, were voted reinstatement as active members.

(c) On motion duly made and seconded, Dr. J. Earl Gossard and Dr. Abram Lipkis of Los Angeles County were elected to Retired Membership.

(d) On motion duly made and seconded, six applicants were granted a reduction of dues because of illness or postgraduate study.

(e) On motion duly made and seconded in each instance, three applicants were elected to Associate Membership. These were: Gordon Meiklejohn, San Francisco County; Mary Clark and Ann Fox, Santa Clara County.

3. *Financial:*

A report of bank balances as of June 22, 1951, was received and ordered filed.

Dr. Lum, chairman of the Auditing Committee, reported on the committee's investigation into compensation paid to editors of state medical journals in other states and on motion duly made and seconded, it was voted to continue the Editor's salary at the present figure, with the understanding that future adjustments would be considered if the duties of the Editor became burdensome.

4. *Merced County General Hospital:*

Dr. Lum, as chairman of the Executive Committee, reported that he and Dr. MacLean, accompanied by Councilors Dau and Thompson and Mr. Hunton, had met with the Merced County Medical Society on June 21 and that the society had voted to approve the report and recommendations of the Executive Committee. The following day Drs. Lum and MacLean and Mr. Hunton met with the members of the Merced County Board of Supervisors, who also approved the report and recommendations.

On motion duly made and seconded, it was voted to discuss with representatives of the Association of

County Supervisors the basic policies involved in county hospital administration and to offer the cooperation of the Association in adjusting differenees which might arise.

5. *California Physicians' Service:*

Mr. William M. Bowman, executive director of C.P.S., reported that all resolutions adopted at the 1951 House of Delegates of C.P.S. had been put into effect or were in such proeess. He reported a beneficiary membership of 976,146 on June 1, 1951, on which date there were 10,863 physician members.

Mr. Bowman also reported on the rccent formation of the "California Doctors' Plan" under the sponsorship of the California Osteopathic Assoeiation. Mr. Bowman also stated that as of June 1, 1951, 52 per cent of the C.P.S. membership had been converted to the new eontraet and that by the end of the year or sooner a complete eonversion will have been reached. Payments on the present fee schedule are now at the rate of 90 per cent and are expeeted to go to 100 per cent by the year-end.

Dr. Francis T. Hodges, representing the Board of Trustees, reported on the resolutions adopted by the 1951 C.P.S. House of Delegates, several of which require Council action. On motion duly made and seconded, it was voted to give to C.P.S. the opening day, or its equivalent, of the interim session of the House of Delegates, provided the morning sessions start at 8 a.m.

Resolution No. 3, referring to a C.P.S. Fee Schedule Committee, was approved by the Council and on motion duly made and seconded, it was voted to leave the payment of this committee's expenses to C.P.S.

On motion duly made and seconded, it was voted to approve the employment of investigators by C.P.S., to cheek on possible abuses in billings to the organization.

6. *State Department of Public Health:*

Dr. Wilton L. Halverson, State Director of Public Health, reported that a smog research bill introdueed into the 1951 State Legislature had been defeated. He expressed the hope that the Assoeiation might cooperate with the universities and other organizations in establishing a thorough research into this problem. The chairman suggested that the Committee on Public Health and Public Ageneies consider this problem.

Dr. Halverson also reported that his department was in agreement with the Santa Clara County Medical Soeicty, which had agreed to cooperate in a pilot study of morbidity survey methods if certain safeguards are set up to insure the review of statistics at the local and statewide level prior to their general release. It was regularly moved, seconded and voted to approve the proposed Santa Clara County pilot study, on the basis that a physieian in the area and another representing the northern part of the state be appointed to the Medical Advisory Committee of the study.

7. *Public Policy and Legislation:*

Dr. Dwight H. Murray, legislative chairman, reported that nearly all the measures sponsored by the Association in the legislative session ended June 23, 1951, had been adopted and that several had already been signed into law by the Governor. He gave a review of some of the important measures and thanked the doctors of the state for their eooperation in legislative matters. Mr. Hassard reported further on additional legislative items.

8. *Committee on Chronic Disease:*

Dr. Edwin L. Bruck, co-chairman of the Committee on Chronic Disease, reported on a conference called by Governor Warren for October 1951, on the Problems of the Aging. Dr. Bruck has been named chairman of the health division, one of ten divisions of the eonferenee, and he requested that physieians from all parts of the state be selected to attend and participate in the conference. It was agreed that the Assoeiation urge such participation in the conference, Dr. Bruck to work out the details of delivering such requests.

9. *California State Dental Association:*

Dr. John B. Benediktson, president-elect of the California State Dental Association, addressed the Council on the subject of fluoridation of potable water supplies as an aid in decreasing the incidence of dental caries. He produced figures on surveys in various parts of the country, showing notable decreases in such conditions, and requested the approval of the Council on this procedure. On motion duly made and seconded, the Council voted to approve the fluoridation of potable water supplies on the basis outlined by Dr. Benediktson of about 1.5 parts fluoride per million.

10. *National Foundation for Infantile Paralysis:*

Dr. Alesen presented Mr. L. D. Belveal of the National Foundation for Infantile Paralysis, who discussed the question of professional fees for polio cases which are being aided by his organization. On motion duly made and seconded, it was voted to approve the policies enumerated by Mr. Belveal for professional fees in such cases, including the following four points:

1. No fee schedule should be developed—fees to be subjcct to discussion between physician and patient.

2. Physician should not bill a non-legal source but should look to the patient or his family for his fee.

3. No payment to be accepted by physieian from a non-legal source. If the National Foundation or other ageney wishes to reimburse the patient, that is a consideration between the two; the ageney should not enter into negotiations concerning the fee or the treatment of the case.

4. To maintain the traditional physician-patient relationship and to preserve an atmosphere of eonfidence and cooperation, the patient should at all times be treated as a private patient.

11. *Public Relations:*

Mr. Clem Whitaker discussed the services of Whitaker & Baxter, pointing out that his firm was prepared to continue its present services, including distribution of its feature service, at the present fee of $750 monthly, or provide a standby consultation service at a fee of $500 monthly. After considerable discussion, portions of it in executive session, it was regularly moved, seconded and voted to continue the present services at the present fee.

12. *Advisory Planning Committee:*

Mr. Hunton reported on the public relations program prepared by the Advisory Planning Committee and previously approved in principle by the Council for execution under the supervision of the Executive Committee. After discussion, it was regularly moved, seconded and voted to reaffirm the approval of this program, under the direction of the Executive Committee, and to extend a vote of thanks to the members of the Advisory Planning Committee who are not employees of the Association but devote their time to this phase of the Association's activities.

On motion regularly made and seconded, it was voted that the field of political public relations would properly be considered the sphere of public relations counsel and that the field of physician-patient relationships under a "grass-roots" program be left in the hands of the Advisory Planning Committee.

13. *C.P.S. Study Committee:*

Dr. Lum, as chairman of the Executive Committee, proposed the membership of the C.P.S. Study Committee, as voted by the 1951 C.P.S. House of Delegates. After discussion, it was regularly moved, seconded and voted that this committee should be composed of: James B. Graeser, Oakland; Alson R. Kilgore, San Francisco; Dave F. Dozier, Sacramento; F. E. West, San Diego; Joseph M. de los Reyes, Los Angeles; Harold P. Tompkins, Los Angeles; Donald Carson, San Francisco; J. Gary Campbell, Santa Barbara; Henry A. Randel, Fresno; F. E. Clough, San Bernardino; and E. Vincent Askey, Los Angeles, chairman.

14. *1951 House of Delegates Resolutions:*

Discussion was held on the resolutions adopted by the 1951 House of Delegates, as follows:

Resolution No. 1, concerning x-ray and laboratory service—C.M.A. office instructed to send copies to parties named in resolution.

Resolution No. 2, concerning Armed Forces Day —requirements of resolution have already been met.

Resolution No. 3, concerning medical ethics — C.M.A. office instructed to advise the county medical societies.

Resolution No. 6, concerning survey methods— cognizance of procedures taken in accordance with the terms of the resolution.

Resolution No. 9, concerning Crippled Children's Program—referred to Committee on Public Health and Public Agencies for discussion with authorities of the State Department of Education.

Resolution No. 10, concerning care of military personnel—referred to C.P.S. Study Committee.

Resolution No. 11, concerning the notarization of narcotics inventory forms—Federal Narcotics Bureau has already taken step advocated of eliminating notarization requirement.

Resolution No. 12, concerning income tax provisions for physicians—required resolution already presented to A.M.A. House of Delegates.

Resolution No. 14, concerning Crippled Children's Program—referred to Committee on Public Health and Public Agencies.

Resolution No. 16, concerning the collection of contributions for medical schools — ascertain the policies of the A.M.A. in this respect and refer to the Executive Committee.

Resolution No. 19, concerning a study of the field of psychology—committee to be named to go into such a study.

Resolution No. 20, concerning medical services in adoption proceedings—Secretary to take up subject with State Department of Social Welfare.

15. *Committee on Scientific Work:*

Dr. Daniels, chairman of the Committee on Scientific Work, reported on several communications received since the 1951 Annual Session and commented on the difficulties surrounding the programming and execution of the annual meeting.

16. *Cancer Commission:*

Dr. Daniels presented the request of a tumor board for interpretation of the question of tumor boards dealing with practitioners in other fields. On motion duly made and seconded, it was voted to follow the policy already adopted of leaving the determination of this question in the local community.

Dr. Lum presented a question from his district relative to a pathologist performing services for practitioners in other fields. It was regularly moved, seconded and voted to refer this inquiry to various decisions of the Judicial Council of the A.M.A.

17. *Legal Department:*

Mr. Hassard commented on several court cases now pending. He also presented his statement for a fee of $5,000 to cover extraordinary work performed by his office in connection with the current legislative session. On motion duly made and seconded, this statement was approved for payment.

18. *Time and Place of Next Meeting:*

It was agreed that the next meeting of the Council should be held in Los Angeles on September 16, the date later being revised to September 23, 1951.

19. *Migratory Farm Workers:*

Dr. Dau reported that the Council of Churches of Christ of America was working on a program of medical services for migratory farm workers and it

was regularly moved, seconded and voted to refer this item to the Executive Committee for action when a concrete program is devised.

20. *Student Nurse Recruitment:*

On motion duly made and seconded, it was voted to appropriate $2,500 to a fund being raised by the Association of California Hospitals, California State Nurses' Association and others to promote student nurse recruitment.

21. *Conference on Schools and Physicians:*

An invitation from the Bureau of Health Education of the American Medical Association for participation in a conference on schools and physicians was voted referred to the Committee on Health and Public Instruction.

22. *Use of Mailing List:*

On motion duly made and seconded, it was voted to authorize the California Heart Association to use the Association's mailing list in sending out notices of its coming scientific meeting.

23. *Committee on Clinical Material for Teaching Hospitals:*

On motion duly made and seconded, it was voted to extend to Dr. William L. Bender and his associates on the Committee on Clinical Material for Teaching Hospitals the thanks of the Council for the good work of the committee.

24. *C.P.S. Fee Schedule Committee:*

On motion duly made and seconded, it was voted to appoint Dr. Walter Beckh of San Francisco as chairman of the C.P.S. Fee Schedule Committee and Dr. A. Justin Williams, San Francisco; J. Philip Sampson, Santa Monica; Darrell Overpeck, Fresno; L. H. Fraser, Richmond; Ralph D. Anderson, Santa Ana; Dudley Saeltzer, Sacramento; and Paul Michael, Oakland, as members.

25. *Committee on Medical Economics:*

Dr. MacLean, former chairman of the Committee on Medical Economics, reported on a conference he and Messrs. Hunton and Waterson had held in New York with Ernest Dichter, Ph.D., following the close of the A.M.A. Annual Session.

Adjournment:

There being no further business to come before the meeting, it was adjourned at 5:20 p.m.

SIDNEY J. SHIPMAN, M.D., *Chairman*
ALBERT C. DANIELS, M.D., *Secretary*

Executive Committee Minutes

Tentative Draft: Minutes of the 227th Meeting of the Executive Committee of the California Medical Association, held in San Francisco, July 5, 1951.

The meeting was called to order by Chairman Lum at 4:00 p.m., Thursday, July 5, 1951, in the office of the Association.

Roll Call:

Present were President MacLean, President-Elect Alesen, Council Chairman Shipman, Speaker Charnock and Auditing Committee Chairman Lum, presiding.

Present by invitation were Executive Secretary Hunton, Legal Counsel Hassard and Executive Secretary Rollen Waterson of the Alameda-Contra Costa Medical Association.

1. *Public Relations:*

Discussion was held on the proposed public relations program outlined by the Advisory Planning Committee. Mr. Hunton proposed that the first step be the employment of field representatives who would be trained in the positive programs advanced and be assigned to specified territories in the state for the purpose of putting such programs into effect in all county medical societies. After thorough discussion it was regularly moved, seconded and voted to place Mr. Ed Clancy, field secretary, in charge of the entire program and to authorize the employment of not more than three field representatives at salaries not to exceed $750 monthly. Several names of potential field representatives were offered.

2. *Location of Association Office:*

Mr. Hunton reported that additional office space would be needed immediately to handle the Association's business, including the public relations program. Additional space could be made available in the same building but at a high rental and requiring considerable rebuilding at the expense of the Association. Space of suitable size had also been located in a building at 518 Sutter Street, comprising the second floor of a building housing a retail store on the ground floor and the office of a radiologist on the third floor. This space could be rented for a considerably lower rental than is now paid and would require alterations at the expense of the Association to be transformed into an office. On motion regularly made and seconded, it was voted to authorize the northern members of the Executive Committee to inspect the proposed space, with power to act in authorizing its leasing. (Note: On July 10 Drs. Shipman and Lum inspected the 518 Sutter Street property and approved its being leased, subject to alterations representing approximately the savings in rental for two years.)

3. *Public Policy and Legislation:*

Mr. Hassard reported that an agreement had been reached with several state officials to cooperate in an effort to improve the salary and other considerations for physicians employed in state institutions. It was regularly moved, seconded and voted to refer this matter to the Committee on Hospitals, Dispensaries and Clinics.

4. *Student American Medical Association:*

On motion regularly made and seconded, it was voted to name Dr. Donald Cass of Los Angeles as C.M.A. representative on the Advisory Council to the Student A.M.A. chapter at College of Medical Evangelists.

On motion regularly made and seconded, it was voted to invite the representatives of the Student A.M.A. chapters at California medical schools to attend the Annual Sessions as guests of the Association.

5. *C.P.S. Study and Fee Schedule Committees:*

Discussion was held on the C.P.S. Study Committee and the C.P.S. Fee Schedule Committee and several potential appointees were named as alternates to the original list of names if the original nominees could not serve.

6. *State Department of Public Health:*

On motion regularly made and seconded, it was voted to appoint Dr. C. V. Thompson as the Association's representative on the advisory committee to the State Department of Public Health in the preliminary study of a morbidity survey in Santa Clara County. The Santa Clara County Medical Society has agreed to name one of its members as another member of this advisory committee.

7. *Study of Psychology:*

In line with a resolution adopted by the 1951 House of Delegates and confirmed by the Council, it was regularly moved, seconded and voted to appoint Dr. Wilbur Bailey as chairman of a committee to make a study of the practice of psychology in California, Dr. Bailey to name his own committee members.

8. *Humboldt-Del Norte Blood Bank:*

On motion duly made and seconded, it was voted to approve a loan of $6,000 to the Humboldt-Del Norte Blood Bank, on the same terms of repayment as previously authorized for other borrowing blood banks and under the conditions previously approved by the Council in establishing the blood bank loan fund.

9. *Western Conference of Practical Nurses:*

Dr. Alesen reported on a meeting he had attended of the Western Conference of Practical Nurses, at which representatives of several organizations were present. The meeting considered, among other things, an educational program for practical nurses. Dr. Alesen suggested that the Association keep in touch with this organization.

10. *Employees' Retirement Program:*

Dr. Charnock, chairman of the Council's committee on employees' retirement program, discussed the advisability of extending the benefits of this program to individuals who devote the major portion of their time and effort to the affairs of the Association while not directly employed by it. It was agreed to give further consideration to this matter.

Adjournment:

There being no further business to come before it, the meeting was adjourned at 6:45 p.m.

DONALD D. LUM, M.D., *Chairman*
ALBERT C. DANIELS, M.D., *Secretary*

A Tribute to Dwight H. Murray

The California State Senate on July 19, 1951, adopted a resolution introduced by Senator Hugh M. Burns of Fresno, paying tribute to Dr. Dwight H. Murray of Napa, legislative chairman of the California Medical Association, on the occasion of his election as chairman of the Board of Trustees of the American Medical Association. The resolution reads as follows:

SENATE RESOLUTION NO. 202

Relative to Dr. Dwight Murray

Whereas, Dr. Dwight Murray, M.D., of Napa, California, has been elected chairman of the board of trustees of the American Medical Association; and

Whereas, Dr. Murray is well known to the Members of the Senate of the State of California through his capable representation of the California Medical Society and his long-time leadership in state and national medical affairs as a member of the board of trustees of the American Medical Association since 1947; and

Whereas, The Members of the Senate of the State of California, in recognition of the importance of the office of chairman of the board of trustees of the American Medical Association and with pride that such office is to be held by a California physician of such eminence and skill as is possessed by Dr. Murray, are desirous of expressing their confidence that Dr. Murray will carry out the duties and responsibilities of his new office in a manner to do credit to the California medical profession and to the State; now, therefore, be it

RESOLVED, by the Senate of the State of California, That Dr. Dwight Murray be, and he is hereby, tendered the sincere congratulations of this Senate upon his election to the office of chairman of the board of trustees of the American Medical Association; and be it further

RESOLVED, That the Secretary of the Senate be, and he is hereby, requested to transmit a suitably prepared copy of this resolution to Dr. Dwight Murray.

California Medical Association

CONSTITUTION and BY-LAWS

CONSTITUTION

ARTICLE I.—NAME, PURPOSES AND ORGANIZATION

Section 1.—Name

The name of this organization is California Medical Association (hereinafter referred to as the Association).

Section 2.—Purposes

The purposes of this Association are to promote the science and art of medicine, the protection of public health, and the betterment of the medical profession; to promote similar interests of its component societies; and to unite with similar organizations in other states and territories of the United States to form the American Medical Association.

Section 3.—Organization

This Association has two divisions: One, the Association as an organization; and Two, the Scientific Assembly. The Association as an organization includes component societies and their active members, the House of Delegates, Council, Commissions and Standing Committees. The Scientific Assembly includes all members of the Association and the scientific sections.

Section 4.—Definition of Component Societies

Component societies include all county medical societies (which may cover one or more counties) heretofore or hereafter chartered by this Association.

Section 5.—Component Society Charters

Charters to component societies may be granted and revoked as hereinafter prescribed, subject to the limitation that only one charter may be outstanding at any one time in any county.

ARTICLE II.—MEMBERSHIP

Section 1.—Classes of Members

The members of this Association shall consist of Active, Associate, Honorary, Retired, Life and Affiliate members.

Section 2.—Membership Qualifications, Rights, Privileges, Duties and Method of Election

The qualifications, rights, privileges, duties, obligations and methods of election of the several classes of membership are as stated in the By-Laws.

ARTICLE III.—GOVERNMENT OF THE ASSOCIATION

Part A.—House of Delegates

Section 1.—Composition

The House of Delegates shall consist of:

(a) Delegates elected by the members of component societies;

(b) Officers of the Association as hereinafter provided;

(c) Ex officio, with the right to vote, the District Councilors, and

(d) Ex officio, without the right to vote, the Past Presidents.

Section 2.—Representation

As the By-Laws shall provide, each component society shall be entitled to proportionate representation in the House of Delegates but with a minimum of two delegates.

Section 3.—Alternates

Alternates shall be elected, as specified in the By-Laws, in the same manner as delegates are elected. One alternate shall be seated in place of each delegate absent or disqualified for failure to attend meetings or other cause.

Section 4.—Terms of Delegates and Alternates

Delegates and alternates shall serve for two or three years as each component society may determine. One-half or one-third, as the case may be, of the allowed number shall be elected each year.

Section 5.—Quorum

A majority of the authorized number of delegates shall constitute a quorum.

Section 6.—Functions of the House of Delegates

The House of Delegates shall be the legislative body of the Association and shall exercise such other functions as the By-Laws may prescribe.

Section 7.—Issuance and Revocation of Charters

(a) The House of Delegates shall issue charters to medical societies of a county or combination of counties deemed eligible and which have made proper application therefor.

(b) The House of Delegates may suspend or revoke any such charter, after due notice and proper hearing, for cause. "Cause" shall be considered to be any conduct or action, on the part of any component society, deemed in contravention of the Constitution and By-Laws of the Association or the American Medical Association or their "Principles of Medical

Ethics." "Cause" shall further be deemed to be any conduct or action of a component society deemed inimical to the best interests of the Association.

(c) It may act on the withdrawal or secession of any component society from the Association and take such measures as are deemed advisable and proper for reinstatement of any component society which may have withdrawn or had its charter suspended or revoked.

(d) A two-thirds affirmative vote of the delegates present and voting shall be necessary for any action under the provisions of this section.

Section 8.—Sessions of the House of Delegates

In each year there shall be one or more sessions of the House of Delegates as fixed in the By-Laws. Special sessions may be called and held as provided in the By-Laws.

Part B.—Council

Section 9.—Composition

The Council shall consist of:

(a) Eleven District Councilors elected from the councilor districts specified in this Constitution; and

(b) Six Councilors-at-Large elected by the House of Delegates, and

(c) The President, President-Elect, and Speaker.

In addition, the Secretary-Treasurer and Editor, ex officio, but without the right to vote.

Section 10.—Councilor Districts

There are eleven districts as follows:

District Number One, comprising San Diego County.

District Number Two, comprising Imperial, Orange, Riverside, San Bernardino, Mono and Inyo counties.

District Number Three, comprising the County of Los Angeles.

District Number Four, comprising the County of Los Angeles.

District Number Five, comprising Ventura, Santa Barbara and San Luis Obispo counties.

District Number Six, comprising Kern, Kings, Tulare, Fresno, Madera, Merced, Mariposa, Stanislaus, San Joaquin, Calaveras and Tuolumne counties.

District Number Seven, comprising Monterey, San Benito, Santa Cruz, Santa Clara and San Mateo counties.

District Number Eight, comprising San Francisco County.

District Number Nine, comprising Alameda County and Contra Costa County.

District Number Ten, comprising Marin, Solano, Napa, Sonoma, Lake, Mendocino, Humboldt and Del Norte counties.

District Number Eleven, comprising Sacramento, Amador, Alpine, Eldorado, Placer, Nevada, Sierra, Yuba, Sutter, Yolo, Colusa, Glenn, Butte, Plumas, Tehama, Trinity, Shasta, Lassen, Modoc and Siskiyou counties.

Section 11.—Election of Councilors

(a) District Councilors shall be elected by vote of the delegates from each district in the manner and at the time specified in the by-laws; provided, however, that at the first meeting of the House of Delegates after a district councilor has been selected, his name shall be submitted to the House by the delegates from the district, and (1) if there is no challenge by any delegate then the speaker shall declare his election completed, and (2) if any delegate shall challenge the election on any ground, including fitness of the nominee of the district to serve as a district councilor, the questions presented by the challenge shall be submitted to a Qualifications Committee consisting of the President, President-Elect and one delegate, appointed by the speaker, from the councilor district involved. The Qualifications Committee shall consider all grounds upon which the nominee is challenged and report back to the House. If the committee reports in favor of confirming the nominee's election, the speaker shall declare him elected. If the committee reports against confirming the nominee's election, a three-fourths affirmative vote shall be necessary to sustain the report of the committee, in which event the nominee shall be ineligible to serve as the district councilor and the delegates from the district shall immediately proceed to the selection of another nominee for the vacant office. If an adverse report of the Qualifications Committee is not sustained then the nominee shall be declared elected by the speaker.

(b) Councilors-at-Large shall be elected one by one from nominations made on the floor of the House of Delegates. Not more than two councilors-at-large shall be elected from any one councilor district.

Section 12.—Councilors: Terms of Office

Councilors shall serve for terms of three (3) years; one-third to be elected in each year.

Section 13.—Council: Powers and Duties

Subject to the provisions of this Constitution, and all resolutions and enactments of the House of Delegates, the Council shall be vested with full and complete power and authority to manage, control, use, invest, reinvest, lease, make contracts in respect of, and concerning, convey, give, grant, transfer or otherwise dispose of all property and assets of whatever kind or nature owned by the Association, and shall also be vested with full and complete power and authority to do and perform all acts and to transact all business for and on behalf of the Association and to manage and conduct all the work and activities of the Association in carrying out the purposes thereof. The Council shall have such additional duties, powers and functions as are prescribed in the By-Laws.

Section 14.—Election of Councilors on Adoption of this Constitution

Upon the adoption of this Constitution, the delegates from each of the eleven councilor districts shall proceed to elect district councilors as follows: At the annual meeting at which this Constitution is adopted the councilors of the First, Fourth, Seventh and Tenth districts shall be elected for terms of one year each; councilors of the Second, Fifth, Eighth and Eleventh districts shall be elected for terms of two years each; and councilors of the Third, Sixth and Ninth districts shall be elected for terms of three years each. Thereafter, as each term expires the delegates from each district shall elect a district councilor to serve for a term of three years.

Upon the adoption of this Constitution, the councilors-at-large holding office at the time of the adoption shall serve the remainder of their terms of office specified in the previous Constitution and as their terms expire successors shall be elected in the manner and for the terms provided in this Constitution.

Upon the adoption of this Constitution and the election of eleven district councilors the terms of office of the nine district councilors elected prior to the adoption of this Constitution will immediately cease and terminate.

ARTICLE IV.—FUNDS, PROPERTY, DUES, ASSESSMENTS AND EXPENDITURES

Section 1.—Annual Dues

At each regular session the House of Delegates shall, by a majority vote, fix the annual dues to be paid by members of the Association for the ensuing calendar year. Dues payable by active members shall be uniform and equal, except that the House of Delegates may reduce dues for certain groups (by general classification) as the By-Laws may expressly permit.

Dues payable by associate members shall be uniform and equal but may be set at not less than one half the regular dues for active members.

Section 2.—Military Service

During any period at which the United States is at war or requires services of doctors of medicine under an universal military training or draft program, annual dues may be reduced or waived by the House of Delegates with respect to those members serving in the Armed Forces of the United States during the whole or any part of any year.

Section 3.—Leaves of Absence

The Council, on recommendation of a component society, may grant leaves of absence to active members who are seriously ill and cannot practice or who leave practice temporarily for postgraduate study or other purposes acceptable to the component society and the Council and during such leave a uniform reduction of dues shall be established by the Council; provided no leave may exceed one year but shall be subject to renewal.

Section 4.—Special Assessments, etc.

Funds may also be raised by any of the following methods: (a) publications of the Association; (b) voluntary contributions; (c) bequests, legacies, devises, and gifts; (d) special assessments levied by the House of Delegates; and (e) in any other manner approved by the House of Delegates. In the event that the House of Delegates levies any special or other assessment than the annual assessment of dues, it may, in the resolution levying the assessment, fix and determine the time within which such assessment must be paid, the class or classes of members of the Association upon whom it is levied, and the penalty, if any, including forfeiture or suspension of membership in this Association or the component society, or both, to result from nonpayment thereof within the time prescribed.

Section 5.—Annual Budget and Expenditures

At each regular session of the House of Delegates, the Council shall submit to it an itemized budget stating the proposed expenditures of the Association for the ensuing year. The budget may be altered or revised by the House of Delegates, but must be adopted by the House before adjournment of the session. After its adoption, no expenditures in excess of the amount of the budget item covering the subject of such expenditures may be made in the year covered by the budget by the Association or any of its officers, agents or employees, unless the Council by a three-fourths vote of all voting members shall first approve such excess expenditure by resolution duly adopted. Recurring items in the budget (fixed expenditures covering more than one year) shall, when first adopted, be binding as to subsequent budgets to the extent of commitments or obligations entered into by the Association within authority granted by the House of Delegates or this Constitution or the By-Laws.

Section 6.—Benevolence Fund

At least $1.00 out of the annual dues paid by each active member of the Association shall be allocated to the Physicians' Benevolence Fund and shall only be used for the purposes as set forth in the By-Laws.

Section 7.—All Funds and Moneys to Be Paid to Secretary-Treasurer and Deposited With Depositary

All funds and moneys received for the Association by any officer or agent thereof shall be promptly paid to the Secretary-Treasurer and by him deposited with a depositary selected as such by the Council.

All depositaries selected by the Council shall be banks or trust companies duly licensed to transact business as such in the State of California.

Section 8.—Membership Interest in Association Property

No person other than an active member in good standing shall have any interest in the property of the Association and the interest of any active member therein shall cease when he ceases to be a member of the Association.

If any active member shall resign or otherwise cease to be an active member of the Association, all of his interest in and to all property of the Association shall cease and such cessation of membership shall operate as a release and assignment to the Association of all the right, title and interest of such member in and to all the property of the Association.

ARTICLE V.—REFERENDUM AND PETITION

Section 1.—Referendum and Petition

The right of referendum and petition shall be as set forth in the By-Laws.

ARTICLE VI.—OFFICERS

Section 1.—Officers

The officers of this Association shall be a President, a President-Elect, a Secretary-Treasurer, a Speaker of the House of Delegates, a Vice-Speaker of the House of Delegates and an Editor.

Section 2.—Powers and Duties of the President-Elect

The President-Elect shall act for the President in his absence or disability, and if the office of President becomes vacant the President-Elect shall then succeed to the Presidency to serve as President for such unexpired term and for the term of one year thereafter.

ARTICLE VII.—SCIENTIFIC ASSEMBLY

Section 1.—Objects

The Scientific Assembly of the California Medical Association is the convocation of its members for the presentation and discussion of subjects pertaining to the science and art of medicine.

Section 2.—Sections

The Scientific Assembly shall be divided into sections, each section representing that branch of medicine described in its title.

Section 3.—Creation of New Sections

New sections may be created or existing sections discontinued by the House of Delegates. The Scientific Assembly and its sections shall be conducted in accordance with the provisions of this Constitution and the By-Laws, and such other instructions by the House of Delegates or the Council as may not be in conflict therewith.

ARTICLE VIII.—MISCELLANEOUS

Section 1.—Incorporation

(a) To aid in carrying out the objects of the Association, the House of Delegates at any meeting of any regular or special session thereof may by a two-thirds vote of the members thereof present and acting, authorize, empower and direct the Council to cause the formation and organization of a non-profit corporation under the laws of the State of California, without capital stock, with such incorporators, name, purposes, objects, principal place of business, term, number of directors and directors to serve for the first year and until their successors are elected and have accepted office, and with such provisions regarding the voting power and property rights and interests of the members of the corporation and such further provisions in the Articles of Incorporation thereof, and with By-Laws and composed of such members representing this Association as the Council shall prescribe, fix and determine. The House of Delegates may at its option in connection with the granting and giving of such authority, power and direction to the Council, prescribe, fix and determine any or all of such matters pertaining to the said corporation, its Articles of Incorporation and any provision thereof, By-Laws and membership, and its action thereon shall bind the Council; and the House of Delegates at any meeting of any regular or special session thereof may by a two-thirds vote of the members thereof present and acting, authorize, empower and direct the Council to grant, assign, transfer, convey and deliver, or cause to be granted, assigned, transferred, conveyed and delivered to the said corporation upon the formation thereof without any consideration therefor, any property, real or personal, of the Association, which authorization, power and direction may be given prior or subsequent to the formation and organization of said corporation.

(b) To further aid in carrying out the objects of the Association, the House of Delegates at any meeting at any regular or special session thereof may, by a two-thirds vote of the membership thereof present and acting, authorize, empower and direct the Council to cause the formation and organization of one or more corporations under the laws of the State of California with such incorporators, name, purposes, county where the principal office for the transaction of business is to be located, first directors, the total number of shares, the aggregate par value, if any, of all shares, classes of shares, par value of any shares having par value, statement of the provisions, privileges and restrictions granted or imposed upon the respective classes of shares, or if the corporation be formed without capital stock the authorized number and qualifications of its voting and other rights of each class of members and the liability of each and all classes, to dues or assessments, and with such further provisions in the articles of incorporation thereof and with such by-laws as the Council shall prescribe, fix and determine; and the House of Delegates at any meeting of any regular or special session thereof may, by a vote of two-thirds of the members thereof present and acting, authorize, empower and direct the Council to grant, assign, transfer, convey or deliver or cause to be granted, assigned, transferred, conveyed or delivered to any of such corporations upon the formation thereof or to applicants for health and accident or other insurance in or from any of said corporations at or prior to the formation thereof without any consideration therefor, such funds and property, real or personal, of this Association as the House of Delegates shall from time to time authorize or ratify.

Section 2.—Seal

The Association shall have an Association seal consisting of a circle having on the circumference the words "California Medical Association, Eureka, 1856," with such further emblems, figures and words as the House of Delegates, on recommendation from the Council, shall prescribe.

The power to change the seal shall rest with the House of Delegates.

Section 3.—Amendments

Any member of the House of Delegates at any meeting of any session, other than a special session, thereof may present an amendment or amendments to any article or articles or any section or sections of any article or articles of this Constitution.

Such proposed amendment or amendments shall be in writing and shall be filed with the Secretary and shall thereafter be published at least twice in separate issues of the official journal of this Association prior to the next session of the House of Delegates.

At the said next session, other than a special session, of the House of Delegates, such proposed amendment or amendments shall be submitted to the House of Delegates, for consideration at any meeting of the House of Delegates during that session, and if two-thirds of the Delegates present and voting vote in favor thereof, the same shall be adopted.

Section 4.—Repeal of All Provisions of Existing Constitution

All articles and all sections and all parts of all articles of the existing Constitution are hereby repealed.

BY-LAWS

CHAPTER I.—COMPONENT SOCIETIES

Section 1.—Component Society Charters

The charter of each component society shall provide that all the provisions of the Constitution and By-Laws of this Association in force at the time of the issuance of such charter, together with all amendments to either thereof thereafter adopted, in so far as the same are applicable, shall be an integral part of the constitution and by-laws of the component society to which the charter is issued and that the terms and provisions thereof shall control and govern such component society, the officers and members thereof, and that the constitution and by-laws of the component society shall not be amended in any way to conflict or be inconsistent with the Constitution and By-Laws of this Association. Each charter shall be signed by the President and the Secretary-Treasurer of this Association.

Section 2.—Revocation of Component Society Charters

The charter of a component society may be suspended or revoked on any of the grounds specified in the Constitution only in accordance with the following procedure:

(a) *Complaint.* A written complaint, stating the grounds for action, shall be filed with the Secretary-Treasurer by the Chairman of the Council pursuant to resolution adopted by the Council by the affirmative vote of two-thirds of the members thereof.

(b) *Notice.* The Secretary-Treasurer of the Association shall, within thirty days of its receipt by him, send by registered mail to the secretary of the component society concerned, a true copy of such complaint.

(c) *Hearing.* Hearing on such complaint shall be held by the House of Delegates at its first session occurring not less than three months after the date of its presentation to the Secretary-Treasurer of the Association.

(d) *Decision.* Suspension or revocation of the charter of a component society shall require a two-thirds affirmative vote of the members of the House of Delegates; provided, however, that the delegates of the component society concerned shall not vote, and their number shall not be counted in determining the necessary two-thirds majority.

Section 3.—Component Society Sections

(a) *Geographical or Specialty Sections.* A component society may authorize the formation and existence of branch geographical or specialty sections for scientific investigation and work only, and the members of such geographical sections or specialty sections must be members of such component society.

(b) *Members in Sections to Be Members of Respective Component Societies.* No geographical or specialty section shall be permitted to have any classes of members which classes in whole or in part include non-members of the component society of which any such geographical or specialty section is a branch or subdivision; provided that nothing in this section shall be construed as limiting the guest privileges of such non-members at meetings of such section.

CHAPTER II.—MEMBERSHIP

Section 1.—What Constitutes Membership

The name of a doctor of medicine on the official roster of this Association, after it has been properly reported by the secretary of his component society, and after the dues or other assessments due this Association shall have been paid by the component society for each such member according to the class of membership held by each component society member, shall be prima facie evidence of membership.

Section 2.—Component Society Rosters of Members; Reports

(a) *Roster.* The secretary of each component society shall keep a roster of its members, on which shall be shown the full name, address, school and date of graduation, date of license to practice in this state, class of membership, and such other information as the Secretary-Treasurer of the Association shall prescribe.

(b) *Reports.* The secretary of each component society shall furnish the Secretary-Treasurer of the Association before the first day of March of each year a list of names and addresses of all members in good standing on the first day of January of each year, shall notify in writing the Secretary-Treasurer monthly of all changes in membership of the component society, and shall submit to the Secretary-Treasurer on forms which the Association shall provide, notice of each application for membership in such component county society with the name, address and all other particulars regarding the applicant known to the secretary.

Section 3.—Qualifications of Active, Associate and Affiliate Members

(a) *Component Societies Sole Judges.* Each component society shall, subject to the minimum requirements for eligibility as hereinbelow provided, determine the qualifications for membership for Active, Associate or Affiliate membership therein, and shall be the sole judge of the qualifications of applicants for such membership.

(b) *Qualifications for Active Members.* To be eligible for election to Active membership in a component society, an applicant must hold the degree of Doctor of Medicine issued to him by an institution of learning accredited at the time of the issuance of such degree by the Board of Medical Examiners of the State of California. He must hold an unrevoked license to practice medicine and surgery issued to him by the Board of Medical Examiners of the State of California, which certificate must have been recorded in the office of the County Clerk in the county in which he practices. He must be of good moral and professional character and must not support, nor practice, nor claim to practice, any exclusive or sectarian system of medicine. He must subscribe to the Principles of Medical Ethics of the American Medical Association and to such as may from time to time be adopted by the California Medical Association, and shall recognize the authorized officers of his component society and of this Association as the proper authority to interpret any doubtful points of ethics.

(c) *Qualifications for Associate Members.* To be eligible for election to Associate membership in a component society, an applicant must possess all the qualifications necessary for active membership except that he shall not be engaged in the private practice of medicine and need not hold a license to practice medicine or surgery granted by the Board of Medical Examiners. For the purposes of this section, a Doctor of Medicine engaged in the private practice of medicine is any physician who receives his principal compensation for professional services on a fee basis.

(d) *Qualifications for Affiliate Members.* To be eligible for election to affiliate membership in a component society, an applicant must be, and must continue to be throughout the term of his membership, an intern, resident or house officer in an approved hospital within the county of the component society concerned.

Section 4.—Qualifications and Election of Other Classes of Membership

(a) *Retired Members.* The Council, on recommendation of any component society, may grant retired membership to those active members who have ceased the practice of medicine to the extent and for reasons satisfactory to such component society and the Council, and who shall have been active members of the Association for a total of ten years prior thereto. Retired membership shall endure as long as the retired member does not engage in full time practice of medicine; but in the event that a member classified as retired resumes active. full time practice of medicine such resumption shall automatically terminate retired membership and reestablish active membership. Upon resumption of full time practice by any retired member, the secretary of his component society shall transfer such member from the retired classification to the active classification, and notify the Secretary of this Association, who shall do likewise with respect to the membership rolls of this Association.

(b) *Honorary Members.* The House of Delegates on recommendation by the Council may elect as honorary members any persons distinguished for their services or attainments as doctors of medicine or in the field of public health, or for research or other scientific work contributing to medicine.

(c) *Life Members.* Those life members elected prior to the adoption of these By-Laws shall remain as such with all of the rights and privileges pertaining to such membership contained in the prior By-Laws, but no new life members shall be elected after the date of the annual session of the House of Delegates at which this section is adopted.

(d) *Special Memberships.* The House of Delegates may, from time to time, establish special and limited classes of membership in this Association for undergraduate medical students, or for interns, house officers, or residents wherever a component society makes no provision for this class of membership. The House of Delegates may also, from time to time, establish other special and limited classes of membership and fix the dues, qualifications, duration and privileges of such membership.

Section 5.—Rights and Privileges of Membership

(a) *Active Members.* Subject to the provisions of the Constitution and these By-Laws, all active members shall be equally privileged to vote, to hold office and to enjoy all other rights and privileges of the Association.

(b) *Associate Members.* Subject to the provisions of the Constitution and these By-Laws, associate members shall have all the rights and privileges of Active Members except the right to vote or to hold office.

(c) *Affiliate, Honorary and Retired Members.* Members in these classes shall be privileged to receive publications of the Association at such rates as the Council may from time to time determine; they shall not have the right to vote nor to hold office.

Section 6.—Membership Where No Component Society Exists

Any Doctor of Medicine residing in an area in which there is no component society may apply for membership in the component society most convenient to the area in which he practices medicine, and if otherwise qualified he may be elected to membership therein.

Section 7.—Membership Where Major Office and Residence Are In Different Component Society Areas

A Doctor of Medicine may apply for membership only to that component society whose charter covers the area in which his major office for professional practice is located; provided that a Doctor of Medicine who resides in one county and practices in another may apply for membership to the component society whose charter covers the area in which his residence is located, if both such component society and the component society of the area in which his major office is located approve.

Section 8.—Membership as Affected by Transfer of Location of Office

A member who changes his office from the county through whose component county society he holds membership in this Association, to another county in which there is a component society, is eligible to membership in the component society of his new location on the presentation of a transfer card, and satisfactory evidence that his dues have been paid in full in the component society in which he holds membership; provided, however, that no evidence which would disqualify him for membership exists.

He shall forfeit his membership in this Association one year after such change of location of practice unless after proper application he is elected to membership in the society of the county to which he has moved.

Section 9.—Transfer Cards

When a member in good standing in a component society moves to another county or other jurisdiction in this state he shall, on request, be given a transfer card, without cost. He must assume such financial obligations as shall be deemed proper by the component society to which he is transferred, and to which he makes application for membership by transfer.

Section 10.—Termination of Membership

(a) *By Expulsion from Component Societies.* Expulsion from any component society, after due proceedings in accordance with these By-Laws, upon becoming final terminates all the rights and privileges in this Association of the member so expelled.

(b) *By Failure to Pay Dues.* If the annual assessments of dues, payable to this Association or to the American Medical Association by any member of this Association, are not paid in full on or before April 1 of any year, such member shall automatically lose his membership in this Association as of April 1 of such year. The Council of this Association, in its discretion, upon payment of such unpaid dues, and any other assessments or dues accruing thereafter, may at any time reinstate such member.

(c) *By Revocation of Physician and Surgeon's Certificate.* Any member whose license to practice medicine and surgery in the State of California is revoked shall, upon receipt of written evidence of such revocation by the Secretary of this Association, thereupon cease to be a member of this Association.

(d) *Acts and Conduct Subjecting Member to Censure, Suspension or Expulsion by Component Society.* Any member of a component society who has been adjudged guilty of a criminal offense involving moral turpitude, or who has been duly adjudged guilty by his component society, in accordance with the procedural requirements of these By-Laws, of gross misconduct as a physician or a surgeon or of a violation of any of the provisions of the constitution or by-laws or principles of professional conduct of his society or of the Principles of Medical Ethics promulgated from time to time by this Association or by the American Medical Association, shall be subject to censure, suspension or expulsion from his society by such component society.

CHAPTER III.—DISCIPLINARY PROCEDURE

Section 1.—Disciplinary Procedure for Component Societies

The procedure to be followed by each component society with respect to the censure, suspension or expulsion of a member shall be:

(1) *Charges; Formal Requirements; a Formal Charge Must First Be Made.* Such charge must be in writing, signed by the accuser, and if made by a person other than a member of the society must be sworn to before an officer of the State of California authorized to administer oaths. Charges must state the acts or conduct complained of with reasonable particularity.

(2) *Charges; Filing; Secretary's Duties; Presentation to Board of Directors (or Grievance Committee).* Charges must be filed with the secretary of the accused member's component society. At the first regular or special meeting of the Board of Directors (or other governing body, whether called Council, Board of Trustees, Executive Committee, or any other name, all of which are herein included in the term "Board of Directors") of such component society held after charges are filed, the secretary must present said charges to the Board. The Board of Directors shall then or at any adjournment of said meeting, but not more than thirty days after the date of such regular or special meeting, consider the charges, and in its discretion determine whether or not further proceedings shall be conducted. If the Board determines that no further action shall be taken, the charges shall be dismissed.

If a component society has no board of directors and more than ten members, its members must, at a regular meeting of the society, elect a grievance committee of not less than five (5) active members in good standing; two members shall be designated by

the society to serve for a period of one year, two members shall be designated to serve for a period of two years, and one member shall be designated to serve for a period of three years. At the expiration of the terms of office of the respective members of such committee, successors shall be elected in like manner to serve for a period of three years each. Such grievance committee shall exercise all the power and perform all the duties herein conferred upon boards of directors in the manner and within the times herein provided. If a society has less than eleven members, the entire society, exclusive of the accuser and accused, shall constitute the grievance committee. All references herein to board of directors shall be deemed to include such grievance committees, and component societies of ten members or less.

(3) *Service of Charge Upon Accused.* If the Board of Directors determines that further action, with respect to said charges, shall be taken, the Board must, within fifteen (15) days after such decision, cause a copy of the charges to be served upon the accused by personally delivering a copy thereof to him, or by depositing a copy thereof in the United States mail, registered and addressed to the accused either at his last known office or at his last known residence.

(4) *Time and Place for Hearing; Service of Notice Thereof.* The Board of Directors shall, at said meeting at which its decision to proceed is made, fix a time and place for a hearing of said charges. Written notice of the time and place set for the hearing shall be served upon the accused within fifteen (15) days by personal delivery or registered mail as aforesaid.

The time so set for a hearing shall be not less than fifteen (15) days after the accused has been served as aforesaid, with a copy of the charges and with the notice of the time and place set for the hearing; said hearing must be held within the county in which the accused holds his county society membership. The hearing before the Board of Directors must actually commence within six months from the date of the filing of written charges. Failure to comply with this requirement shall constitute an automatic dismissal of the charges.

(5) *Right of Accused to Answer; Time to Answer; Formal Requirements.* The accused may, not less than five (5) days before the time set for a hearing, answer said charges. The answer shall be in writing and the original and three copies shall be filed with the secretary of the society; provided, however, that the failure of the accused to answer shall not be deemed to be an admission of the truth of the charges or a waiver of the accused's right to a hearing with respect to said charges.

(6) *Rules Governing Hearing; Duties of Referee of Society; Advice as to Procedure Only.* The Board of Directors shall give ample opportunity both to the accuser and the accused to be heard in person, and to present all testimony, evidence, or proofs which the accuser or the accused may deem necessary, provided that the Board may reject all testimony, evidence, or proofs, which in the judgment of the Board are immaterial, irrelevant or unnecessarily repetitious.

Either the Council or the Executive Committee of the California Medical Association, whenever it shall come to the attention of either thereof that a disciplinary proceeding is pending before any component society, may of its own motion, and shall, upon the request of such component society or of the member or members thereof the subject of any such disciplinary proceeding, appoint a referee who may, but need not be, a member of the California Medical Association, and shall cause the Secretary of the California Medical Association to notify the secretary of such component society of such appointment. The referee so appointed shall preside at the hearing of said charges and shall make all decisions concerning the admission or rejection of testimony or other evidence and procedure. The referee shall not, however, have any voice nor participate in any manner in the determination by the Board of Directors of the disposition of the charges. During the hearing the referee shall perform all duties normally performed by the presiding officer of the Board of Directors.

(7) *Record of Proceedings; Shorthand Reporter; Duty of Secretary to Preserve Board Records; Right of Accused to Copy.* The secretary shall preserve the original of said charges with a certificate of personal delivery or of mailing of a copy or copies thereof, as the case may be, the original notice of the time and place set for the hearing with a certificate of personal delivery or of mailing of a copy or copies thereof, as the case may be, and the original of the answer filed by any member accused if an answer be filed. At the hearing, the Board of Directors shall, at the expense of the society, employ a competent shorthand reporter to record and transcribe into typewriting testimony adduced on behalf of the accuser and the accused and all rulings made. The original charges with certificate of service thereof, the original notice of time and place for hearing with certificate of service thereof, the answer or answers, if any be filed, all documentary evidence introduced at the hearing, the typewritten transcript of the testimony and the written decision of the Board of Directors shall constitute the record of the entire proceedings. The Secretary shall, upon receipt from accused of a sum sufficient to defray the cost thereof, cause a copy or copies of such record to be transcribed, certified and furnished to the accused.

(8) *Decision of Board; When Must Be Written; Rules Governing Vote of Board.* The Board of Directors, after having given the accuser and the accused member full opportunity to be heard, shall conclude the hearing and shall render its decision in writing not more than thirty (30) days thereafter. Hearing shall include any oral arguments and the filing and consideration of any written briefs. The Board of Directors by a two-thirds affirmative vote of all the eligible members of the Board present and voting may exonerate or may censure, suspend or expel

the accused member as the facts in its opinion may justify.

The decision of the Board of Directors may be expressed in resolution adopted by said vote. The decision may, but need not, contain an opinion and need only be signed by the secretary or the acting secretary of the component society.

The failure of at least two-thirds of all the members of the Board of Directors present and voting to agree upon the disposition of the charges shall act automatically as a dismissal of the same. No member of the Board of Directors not present at the said hearings for the entire time thereof shall be entitled to vote with respect to the disposition of the charges.

(9) *Suspension; Maximum Period; Status of Suspended Member.* If the Board of Directors shall determine to suspend an accused member, the term of such suspension shall be within the discretion of the Board, provided that in no case shall a member be suspended for a period greater than one year. A suspended member shall have no rights or privileges in the society, provided that at the expiration of the period of suspension such suspended member shall not be reinstated to membership in good standing until he applies for reinstatement and pays all dues accrued during said period of suspension.

(10) *(a) Board's Decision; Secretary to Send Copies.* Within ten (10) days after the decision of the Board of Directors, the secretary of the society shall transmit a copy of the decision to the Board, to the accused member or members and to the Secretary of this Association.

(b) Board's Decision Final; Subject to Appeal. The action of the Board of Directors of a component society shall be final, subject only to appeal to the Council of the California Medical Association in such cases as are provided in these By-Laws.

The decision of the Board of Directors shall not become effective until the expiration of ten days after time during which an appeal may be taken to the Council of this Association. Filing an appeal with the Secretary of this Association shall automatically stay the execution of the decision of the Board of Directors of the component society until written notice of the action of the Council of this Association with respect to appeal has been received by the secretary of the component society from which the appeal was taken.

(c) Technical Rules of Evidence Not to Govern Disciplinary Hearings. All hearings with respect to the disposition of charges against a member of a component society shall be held and conducted in such manner as to ascertain all the facts fairly to the accuser and accused, eliminating all formal or technical rules and requirements which ordinarily pertain to judicial proceedings.

(d) Members Agree That No Cause of Action Shall Accrue. Any person so charged, censured, suspended, or expelled shall have no claim or cause of action against this Association, a component society or any member, director, councilor or officer, thereof by reason of such charges, or the hearing or the consideration thereof or censure, suspension or expulsion therefor.

(e) Expelled Members; Right to Apply for Membership; When Accrues. Any person whose membership has been involuntarily terminated in a component society by reason of violation of these By-Laws may apply for membership after the expiration of one year from the date said membership was terminated, and such application shall be considered in the same manner as a new application for membership.

Section 2.—Procedure for Appeal to Council

A member of a component society censured, suspended or expelled by his county society may appeal from the action of such component society to the Council of this Association within the period of two months succeeding the date of such censure, suspension, or expulsion. Appeals shall be in writing and be filed within the said period of two months in the office of the Secretary of this Association. Said appeal shall be accompanied by a copy of the record of the entire proceedings before the component society duly certified by its secretary, provided the Chairman of the Council may, in his discretion, extend the time of the appellant to file said record. Upon the filing of an appeal the secretary shall present it to the first subsequent meeting of the Executive Committee or the Council. Appeals shall be heard by the Council only after reasonable notice of not less than ten (10) days in writing of the time and place of the hearing of the appeal has been given to the appellant member and the president and secretary of the component society as provided in Section 3 hereof.

Section 3.—Rules Governing Appeals

In hearing appeals, the Council shall review all questions of procedure, and may, in its discretion, review the evidence contained in the record of the original proceedings held before the Board of Directors of the component society. The Council may make findings of fact contrary to, or in addition to, those made by said Board of Directors. Such findings may be based on the evidence adduced before said Board of Directors, either with or without the taking of evidence by the Council. The Council shall use any lawful means which in its judgment will best and most fairly present all the facts involved. The Council may, for the purpose of making such findings or for other purpose in the interest of justice, take additional evidence of or concerning facts material to the questions involved, or may, for such purpose, appoint a committee of its members or any notary public to act as referees or referee for the taking of such additional evidence.

Such referee or referees shall render a report in writing to the Council, which report shall contain a clear statement of the facts found by the referee or referees from the testimony or evidence adduced.

The Council may affirm, reverse or modify the decision of the Board of Directors or make such other disposition of the proceedings as it may deem proper.

In every case of an appeal the individual councilors and the Council, through a committee thereof, prior to any hearing being held upon the appeal, shall exert all proper efforts at conciliation and compromise.

This Association may be represented by its attorney to advise the Council upon procedural questions only.

The decision of the Council shall be final and bind the appellant member and the component society.

CHAPTER IV.—SESSIONS AND MEETINGS; SCIENTIFIC SECTIONS

Section 1.—Division of Scientific Work

(a) *Scientific Sections.* The scientific work of the Association shall be divided into fifteen scientific sections, as follows: General Medicine; General Surgery; Pediatrics; Eye, Ear, Nose and Throat; Urology; Anesthesiology; Obstetrics and Gynecology; Radiology; Industrial Medicine and Surgery; Pathology and Bacteriology; Dermatology and Syphilology; Neuropsychiatry; General Practice; Public Health; and Allergy.

(b) *Rules of Procedure of Scientific Sections.* Each scientific section shall adopt rules of procedure for its own better government and work. Its officers shall be responsible for the proper keeping of records of scientific and business meetings.

(c) *Officers of Sections.* The members of each section shall at the regular annual session of the Association elect a chairman and a secretary to serve for the term of one year.

(d) *Program.* Each of the sections shall present a scientific program at the annual session of the Association, and its officers shall be responsible for the proper preparation of the same, and for the proper cooperation with other scientific sections during the annual meeting.

Section 2.—Registration at Annual Sessions Necessary for Participation Therein

Each member in attendance at any session shall register, after his right to membership has been verified by reference to the records of this Association. No member shall take part in any of the proceedings of any session until he has complied with the provisions of this section of the By-Laws.

Section 3.—Addresses and Papers at Annual Session

(a) The program at Annual Sessions shall be divided between general meetings and section meetings as the Council shall deem appropriate.

(b) At the General Meetings shall be delivered the annual address of the President and, with the sanction of the Council, such other addresses and reports as may be deemed desirable.

(c) Excepting the President's address and such other addresses and reports as the Council may determine, no address or paper shall occupy more than twenty minutes in delivery.

(d) No member, except by unanimous consent, shall speak more than once in the discussion of any paper nor longer than five minutes at any one time. This subsection of the By-Laws shall be printed on all programs of general and section meetings.

Section 4.—Scientific Papers Property of Association

All papers read before this Association shall be its property.

Each paper, when it has been read, shall be deposited with the secretary of the section, by him to be promptly turned over to the Secretary of the Association.

Section 5.—Scientific Papers Not to Be Published Elsewhere

Authors of papers read before this Association shall not cause them to be published elsewhere except with the consent of the Committee on Publications.

Section 6.—Committee on Arrangements for Annual Session

(a) *Appointment and Duties.* The Chairman of the Council, subject to the approval of the Council, shall, at least six months before each annual session, appoint a Committee on Arrangements for the sessions of the ensuing year, one member thereof being designated as the general chairman. This committee shall consist of five members.

The Secretary-Treasurer of the Association shall be ex officio a member of this committee.

This committee shall have charge of all local arrangements not otherwise provided for.

The terms of office of members of this committee shall expire when the succeeding committee on arrangements is appointed.

As the local Committee on Arrangements this committee shall provide suitable meeting places and shall have general charge of all local arrangements. The committee shall have power to appoint local advisory members and subcommittees to aid in its work.

(b) *Commercial Exhibits.* The Council shall decide what portion of the income from commercial exhibits or other convention services shall go to the local Committee on Arrangements. The location and rules for the commercial exhibits and other accessory annual session activities shall be subject to the approval of the Council.

(c) *Local Convention Expenses.* The Council shall decide what portion of the local expenses shall be borne by the Association.

(d) *Report on Committee on Arrangements.* The Committee on Arrangements shall make and file with the Secretary-Treasurer of the Association an itemized, detailed report of all its receipts and disbursements, and shall remit any moneys due the Association remaining in its possession, to the Secretary-Treasurer.

Section 7.—All Meetings of Same Session Shall Be in Same Locality

The general meetings of the Association, the meetings of the House of Delegates, and the meetings of the Scientific Assembly and its sections at any session shall be held in the State of California at the same locality and in buildings as convenient of access, one to the other, as may be possible.

CHAPTER V.—HOUSE OF DELEGATES

Section 1.—Secretaries of Component Societies To Furnish Lists of Delegates and Alternates: Election and Lists

Each component society shall elect a delegate and one alternate for such delegate in an aggregate number of delegates and alternates equal to the total number of delegates and alternates to which the component society is entitled. At least sixty days prior to the next scheduled session, the secretary of each component society shall forward to the Secretary-Treasurer of the Association, on forms provided by the Association, the names and addresses of each delegate and his alternate elected by such component society, and shall certify thereon the dates of election and expiration of terms of service of each delegate and his alternate.

Failure to conform to this provision shall constitute grounds for disqualification of the delegation in default for the scheduled session, at the discretion of the House of Delegates.

Section 2.—Representation

Commencing with the 1952 regular session of the House of Delegates, each component society shall be entitled to one delegate with one additional delegate for each fifty active members, or major fraction thereof, as of the first day of November of the preceding year; provided, however, that each component society shall be entitled to a minimum of two delegates.

Section 3.—Limitations on Seating of Delegates

Only duly elected delegates or their elected alternates may be seated at any session of the House of Delegates unless the Secretary of the Association has been given due notice of substitution at least fifteen (15) days in advance of the session.

Section 4.—Disqualification of Delegates or Alternates for Absence From a Session

Any delegate absent without good cause from two or more consecutive meetings of the House of Delegates, and who has failed to give fifteen days' notice to the Secretary of the Association of his inability to be present, shall thereupon be disqualified as a delegate and, in addition, ineligible for reelection as a delegate or alternate for three years immediately succeeding the expiration of his term; except that the Committee on Credentials may excuse absence on presentation of good cause therefor.

Section 5.—Notification of Delegates

The secretary of each component society promptly shall notify in writing each delegate and alternate immediately after his election to such office, and shall expressly direct each delegate's and alternate's attention to the provisions of Section 4 above.

Section 6.—Qualifications of Delegates and Alternates

At least three (3) years' active membership in good standing in the component society immediately preceding election shall be required for election as delegate or alternate.

Section 7.—Sessions and Meetings

(a) In each year there shall be two regular sessions of the House of Delegates; the time and place of such sessions to be determined by the Council as far as possible in advance and notice thereof published in the Journal of the Association. One of these sessions shall be held in the first six months of each calendar year and is designated the Annual Session; the other shall be held in the last six months of each calendar year and is designated the Interim Session.

(b) In addition to regular sessions, special meetings of the House of Delegates may be called at any regular or special meeting of the Council, by a two-thirds vote of all the members of the Council, or by written call stating the object of the meeting, filed with the Secretary in the office of the Association and signed by one-half or more of the members of the House of Delegates. Upon the filing of such call with the Secretary, the Council shall within thirty (30) days thereafter fix the time and place for the holding of such special meeting and cause written notice thereof stating the object of the meeting to be sent by United States mail, postage fully prepaid, to each member of the House of Delegates, addressed to him at his office or place of residence, as shown by the records of the Secretary's office, at least fifteen (15) days prior to the date of the meeting.

(c) Resolutions and other new business may be introduced at either regular session, but shall not be acted upon until the next regular session; provided, however, that any resolution designated as an emergency measure may be acted upon at the session in which it is introduced, but shall require a two-thirds affirmative vote for adoption.

Section 8.—House of Delegates Committees

Prior to or at the commencement of each annual session the Speaker of the House shall appoint from the members thereof the following committees:

1. A Committee on Credentials.

2. A Reference Committee on Finance, to review the reports of the Secretary-Treasurer and Executive Secretary and to study and make recommendations to the House of Delegates on the budget submitted by the Council and the amount of dues for the ensuing year.

3. A Reference Committee on the reports of Officers, Council, Standing and Special Committees, and

4. Two or more Reference Committees on resolutions, amendments to the Constitution and By-Laws, and new and miscellaneous business (the Speaker may allocate amongst these committees all business properly referable to them).

Section 9.—Membership of Credentials and Reference Committee

Each of the aforesaid committees shall consist of three members, the chairman of each to be designated by the Speaker.

The Speaker, the House concurring, shall refer said reports, resolutions, and business to the respective Reference Committees, but may allocate among them any of said reports, resolutions or portions thereof, and other business, to avoid duplication and to expedite the business of the House of Delegates.

Each Reference Committee shall prepare a written report dealing with and making recommendations on all matters submitted to it. In those instances in which resolutions or other matters remain before a Reference Committee between meetings of the House of Delegates, copies of such resolutions or other matters and the recommendations of the committee thereon shall be mailed or delivered by the Secretary to each elected delegate and alternate at least thirty days (or if less than thirty days intervenes between meetings, as early as possible) prior to the meeting of the House of Delegates at which such resolutions or other matters and recommendations concerning them are to be considered. The report of each committee may be acted upon as a whole or section by section, as the House may determine.

Section 10.—Duties of Credentials Committee

The Secretary of the Association shall supply the Committee on Credentials with the necessary information concerning the membership of the House of Delegates.

The Secretary shall give this committee a list of component societies, showing the total membership as of November 1 of the preceding year. This committee shall ask each delegate and alternate to present his written credentials, but shall accept the official written list submitted by the secretary of any component society; provided that such written list be sent to the Secretary of the Association at least fifteen days before the beginning of the annual session.

The Committee shall make a written report to the House of Delegates of the delegates and alternates entitled to membership therein.

Section 11.—Special Committees of House of Delegates

The Speaker, the House of Delegates concurring, shall have the right to appoint special committees of the House for special work. All committees of the House of Delegates shall present their reports to the House of Delegates in writing.

Section 12.—Loyalty

The Committee on Credentials shall require each delegate and alternate who desires to be seated as a member of the House of Delegates, to subscribe to the oath or affirmation in the form required for officers under Section 3 of Chapter XIII. In the event of refusal to subscribe to such oath, the Credentials Committee may at its discretion refuse to include such person in its written report to the House of Delegates designating the delegates and alternates entitled to membership therein. Any person refused a seat by action of the Credentials Committee shall have the right to appeal to the House and by majority vote the House may overrule the Credentials Committee and seat such person as a delegate.

CHAPTER VI.—COUNCIL

Section 1.—Council: Organization

At the first meeting of the Council held after the adjournment of the last meeting of the House of Delegates at the annual session of the Association, the Council shall organize by the election of one of the Councilors as Chairman of the Council, who shall serve as such up to the first Council meeting held after the adjournment of the last meeting of the House of Delegates of the next succeeding annual session of the Association; and a Vice-Chairman who shall hold office for the same term, and who, in the absence of the Chairman, shall perform the duties of the Chairman. The Secretary-Treasurer of the Association shall serve as the Secretary of the Council.

Section 2.—Registry

The Secretary-Treasurer, in writing, shall request each Councilor to register his address where he desires all notices to be sent to him by mail or telegram.

Section 3.—Quorum

A majority of the voting members of the Council shall constitute a quorum.

Section 4.—Meetings

(a) The time and place of meeting shall be fixed by the Council at a previous meeting and at least ten days notice shall be given each Councilor by the Secretary of the time and place of the meeting.

(b) The Council shall also meet on the call of the Chairman or upon written request of at least three (3) Councilors filed with the Secretary stating the purpose of the proposed meeting. Written notice of the time, place and object of such meeting shall be given by the Secretary to all members of the Council at least three (3) days prior to such meeting.

Section 5.—Order of Business

At meetings of the Council, business shall be transacted as the Council may determine from time to time by resolution.

The Council shall provide and fix the order of business of the House of Delegates at each session, provided that the House of Delegates may change the order of business by a majority vote.

Section 6.—Executive Committee of Council

The Executive Committee shall consist of the President, President-Elect, Chairman of the Council, Chairman of the Auditing Committee, and the Speaker of the House of Delegates. The Secretary-Treasurer and Editor shall be members ex officio, but without the right to vote.

(a) *Officers.* The Executive Committee shall elect its own chairman. The Secretary-Treasurer of the Association shall act as the secretary thereof.

(b) *Quorum.* Four members shall constitute a quorum.

(c) *Duties and Powers.* The Executive Committee shall aid and assist the officers and the Council in the transaction of the business of the Association in the intervals between the meetings of the Council. It shall have such additional duties and powers as are imposed upon it by this Constitution and the By-Laws. It shall have such advisory powers and such other duties as the Council shall from time to time determine.

(d) *Records.* It shall keep a record of its proceedings and report the same to the Council.

(e) *Executive Committee Meetings.* The Executive Committee shall meet on call of the President, the Chairman of the Council or the Chairman of the Executive Committee, on forty-eight hours' notice by mail or telegraph to the members thereof, if the meeting is to be held at the office of the Association; otherwise on at least three days' notice of the time and place of meeting.

(f) *Authorization or Approval of Council Necessary.* All of its acts and proceedings, unless expressly provided for by this Constitution and the By-Laws, shall be expressly authorized or ratified and approved by the Council.

Section 7.—Auditing Committee of Council

The Chairman of the Council, subject to its approval, shall appoint an auditing committee of three members, designating one of the members as its chairman, the duties of which committee are hereinafter specified.

Section 8.—Duties of District Councilors

Each District Councilor shall be organizer, peacemaker and censor for his district. He shall visit each county in his district at least once a year for the purpose of organizing component societies where none exist, of inquiring into the condition of the profession, and of maintaining touch with the activities of the component societies of his district. He shall in writing make an annual report of this work and of the condition of the profession of each county in his district to the Council, which shall take such action thereon as it may deem best.

Section 9.—Expenses of Councilors and Officers

Councilors and officers shall be allowed railroad fare or mileage, plus an allowance for maintenance expense, while absent from their places of residence; (a) in attending Association, district or county society meetings; (b) meetings of committees of the Association; (c) authorized councilor or officer visits to county societies; (d) and otherwise when on official business, authorized or approved by the Council.

Section 10.—Mail Ballot

The Chairman of the Council, at any time, may direct the Secretary to submit any urgent matter or question to the members of the Council by mail ballot, the question or proposition being prepared through conference of the Secretary with Chairman of the Council and the Chairman of the Executive Committee; and the vote of two-thirds of the members upon such question by mail or telegraph shall be binding upon the Council.

Section 11.—Offices

The Council shall provide and secure such offices for the Association as may be required to conduct its activities and business properly.

Section 12.—Employment of Secretary-Treasurer, Assistant Secretaries, Editor and Associate Editors

The Council shall employ a Secretary-Treasurer and an Editor, and, in its discretion, one or more Assistant Secretaries or Associate Editors. The terms of their employment shall be such as are satisfactory to the Council, provided, however, that no contract of employment shall, by its terms, exceed a period of three (3) years from the date of the organization meeting at which such contract is authorized.

Section 13.—Qualifications of Secretary-Treasurer and Editor

No person shall be eligible to the office of Secretary-Treasurer or Editor or Associate Editor who does not hold the degree of Doctor of Medicine, but membership in this Association shall not be a necessary qualification for the offices of Secretary-Treasurer, Editor or Associate Editor.

Section 14.—Executive or Field Secretaries or Representatives

The Council may employ one or more Executive or Field Secretaries or representatives, who need not be physicians or members of the Association. The duties of such a representative or representatives, if appointed, shall be determined by the Council by resolution.

Section 15.—Legal Counsel

The Council at its annual organization meeting shall appoint one or more legal advisers, giving each such title as may be deemed proper. It shall fix the amount of retainer and other fees.

The Council shall have the right to request the attendance of Counsel of the Association at any meetings at which it might desire his presence and

advice, and at such meetings he shall call attention to matters in which the legal aspects may be of importance, and shall give such other opinions in special matters as may be requested of him by the Council.

The General Counsel shall present in writing as promptly as the same may be properly prepared, such legal opinions as may be requested by the House of Delegates, the Council or the Executive Committee.

CHAPTER VII.—COMMITTEES

Section 1.—Standing Committees

The standing committees of this Association shall be as follows:

(a) Scientific Work
(b) Public Policy and Legislation
(c) Medical Defense
(d) Medical Education and Medical Institutions
(e) Hospitals, Dispensaries, and Clinics
(f) Medical Economics
(g) Associated Societies and Technical Groups
(h) History and Obituaries
(i) Industrial Practice
(j) Postgraduate Activities
(k) Public Relations
(l) Physicians' Benevolence Committee
(m) Military Affairs and Civil Defense
(n) The Reference Committees of the House of Delegates

until final adjournment of each regular session.

Section 2.—Standing Committees; How Elected; Term of Office

Unless otherwise provided in these By-Laws, each of the standing committees (except House of Delegates Reference Committees) may consist of one member of the Council and two other members. Members of standing committees (other than House of Delegates Reference Committees) shall serve for a term of three (3) years. One member of each of these committees shall be nominated annually by the Council and if approved by the House of Delegates shall be deemed elected.

Section 3.—Report Procedure for All Committees

Regular standing and special committees of the Association may make investigations and surveys on authorization of the Council or House of Delegates, but all recommendations and reports of all committees (unless expressly otherwise provided in the Constitution or By-Laws) must be submitted only to the Council or House of Delegates. Other than as herein stated no committee is authorized to act for or represent this Association.

Section 4.—Advisory Groups to Standing Committees

To aid it in its work, each committee, if it so desires, shall have the power to appoint an Advisory Group to its committee, consisting of from two to ten members. Such advisory members, if present at a regular committee meeting, shall not have the right to vote.

Section 5.—Officers of Standing Committees

The chairman of each of these committees, except the Committee on Public Relations, shall be nominated and elected annually by the Council, by and with the approval of the House of Delegates. The chairman of the Committee on Public Relations shall be elected by said committee, subject to the approval and confirmation of the Council, and in the event of a failure to elect within sixty days after adjournment of the annual session the Council shall elect said chairman. Each of these committees shall, each year, except as otherwise provided in these By-Laws, at its first meeting or official consultation, during or following the annual session elect its own secretary.

Section 6.—Secretary-Treasurer's Notice to Standing Committees

The Secretary-Treasurer of the Association, within one month after the annual session, shall write the Committee Chairman of the preceding year, to call a meeting for organization and consideration of any business. The Secretary shall also send a copy of this letter to each of the other members of the committee.

Section 7.—Annual Reports of Standing Committees

At least sixty days prior to the annual session, each of these committees shall submit a written report to the Council on its work during the preceding year, the same to be printed in the Pre-Convention Bulletin as otherwise provided.

Section 8.—Committee on Scientific Work

The Committee on Scientific Work shall consist of the Secretary-Treasurer, the secretaries of the sections on general surgery and general medicine and three other members to be elected by the Council, each of these three members to serve three years, one member being elected each year. The Secretary-Treasurer shall be chairman.

This committee shall determine the character and scope of the scientific proceedings of the Association for each session, and shall invite the guest speakers, subject to the instructions of the Council.

At least thirty days previous to each annual session it shall prepare and issue a program announcing the order in which papers and discussions shall be presented.

This committee shall have one joint session with the section secretaries, at a time and place to be designated by the chairman of the committee, at least forty-five days prior to the annual session, to coordinate more efficiently the various activities of the Association at its annual session. The chairman of the local committee on arrangements shall be invited to attend this meeting.

Section 9.—Committee on Public Policy and Legislation

The Committee on Public Policy and Legislation shall consist of three elected members, and ex officio, the President and President-Elect.

The chairman of the committee, and in his absence, the President, shall act as chairman at the joint meetings of this central state group and of auxiliary county groups.

(a) *Functions of the Committee.* The Committee on Public Policy and Legislation and its auxiliary county groups shall represent the Association in securing and enforcing legislation in the interest of public health and of scientific medicine, subject, however. to the approval of the Council.

(b) *County Auxiliary Committees on Public Policy and Legislation.* Each component society shall appoint or elect three of its members as members of its auxiliary Committee on Public Policy and Legislation, designating one member as chairman; and the component society secretary shall send promptly the names and addresses to the Secretary of this Association.

(c) *Work of Auxiliary County Committees.* The Committee on Public Policy and Legislation of this Association, with the sanction of the Council, shall formulate the duties of these county auxiliary committees and supply each member with a copy of its suggestions and instructions. The auxiliary committeemen shall be accountable to their component societies and to the Council of this Association for prompt and continued cooperation with the Committee on Public Policy and Legislation of this Association.

Section 10.—Committee on Medical Defense

The Committee on Medical Defense, subject to the approval of the Council, shall prepare plans and establish rules for the protection of the legal rights of members of this Association against whom suits for alleged negligence have been threatened or brought.

It may assist in the defense of any member sued for alleged negligence if the member was in good standing and had complied with the rules of the Council when the service on account of which suit was threatened or brought was rendered—provided that the committee determines that the position of the member merits such action.

Section 11.—Committee on Medical Education and Medical Institutions

The Committee on Medical Education and Medical Institutions shall serve in this State for the Council on Medical Education of the American Medical Association.

It shall keep in touch with the problems pertaining to medical education and to medical and other institutions of training for medicine and the healing art.

Section 12.—Committee on Hospitals, Dispensaries and Clinics

The Committee on Hospitals, Dispensaries and Clinics shall serve in this State for the Council on Hospitals of the American Medical Association.

It shall keep in touch with the problems arising in the fields of work of all types of hospitals, dispensaries and clinics giving special attention to those activities that are, or tend to become, a menace to the best interests of scientific medicine and of the profession and its members.

Section 13.—Committee on Medical Economics

The Committee on Medical Economics shall investigate matters affecting the economic status of doctors of medicine.

Section 14.—Committee on Associated Societies and Technical Groups

The Committee on Associated Societies and Technical Groups, subject to the instructions of the Council, shall endeavor to create proper liaisons between this Association and other state and national medical organizations, as well as with the organizations of related professions, such as dentistry, pharmacy and nursing. It shall also endeavor to bring about a proper understanding with non-medical organizations or groups of technicians and others whose work has a bearing on or is related to the practice of medicine.

Section 15.—Committee on History and Obituaries

The Committee on History and Obituaries shall compile and prepare for the archives and for the publications of the society suitable articles on the history of the Association and statements concerning deceased members. The Editor and the Secretary shall be members of this committee. ex officio.

Section 16.—Committee on Industrial Practice

The Committee on Industrial Practice shall keep in touch with matters and problems peculiarly connected with industrial practice.

Section 17.—Committee on Postgraduate Activities

The Committee on Postgraduate Activities, of which the Secretary-Treasurer shall be an ex officio member, shall use its best efforts to promote the postgraduate and clinical courses and instruction among the component county units of the Association.

The supervision of such postgraduate and clinical courses and instruction shall be carried on through the central offices of the Association, the Council being empowered to defray travel expenses of guest speakers and other costs incident to such work to such amount as in the judgment of the Council may be deemed proper. In the development of such postgraduate and clinical courses and instruction, it is stipulated that the component societies, through their constituted representatives, shall cooperate with the Standing Committee on Postgraduate Activities and shall also arrange to bear a proper proportion of the expense thereof of such amount as may be mutually agreed upon.

Section 18.—Committee on Public Relations

The Committee on Public Relations shall consist of the chairmen of the following committees: Public Policy and Legislation, Medical Economics, Associated Societies and Technical Groups, the President,

President-Elect, and two additional members appointed by the Council.

The committee shall be responsible to the Council and the House of Delegates for all of its activities.

The Council or the Executive Committee may instruct the Committee on Public Relations, and outline to it certain policies and duties which shall be executed through the Director of Public Relations. In the event of any disagreement between the committee and the Council or the Executive Committee as to any activity or policy, the decision of the Council, after full discussion and hearing, shall be final.

The committee shall make recommendations to the Council for approval as to the time, the place, the number of meetings and the budget of the Department of Public Relations, provided that the Secretary shall call the first meeting of the committee within thirty (30) days following the annual meeting of the Association.

The Director of Public Relations shall be appointed by the Council (after consultation with the Committee on Public Relations) annually at the organization meeting of the Council. He shall serve at the pleasure of the Council and the Committee. He shall act under the supervision and instruction of the chairman of the committee in such matters as shall be approved and sanctioned by the committee, and be responsible to the committee.

The Council shall arrange with the general counsel to give the committee all legal aid.

The committee shall annually at its first meeting elect its own chairman, subject to the approval and confirmation of the Council. The Secretary of the Association shall be ex officio secretary. A majority of the committee shall constitute a quorum.

Section 19.—Physicians' Benevolence Committee

The Physicians' Benevolence Committee shall administer those funds of this Association hereinafter designated as comprising the Physicians' Benevolence Fund. These are:

(a) The funds which may from time to time be allocated to it, from the general funds of the Association, by the Council or by the Constitution, are the funds for this committee.

(b) All bequests, voluntary contributions, and donations, from any source whatever, that may be received by this Association for the express or implied purpose of aiding needy members and their dependents.

Funds contained in the Physicians' Benevolence Fund may from time to time be disbursed by the Physicians' Benevolence Committee.

Section 20.—Committee on Military Affairs and Civil Defense

The Committee on Military Affairs and Civil Defense shall have the duty and responsibility to consult with constituted authorities concerning these subjects and administer problems of civil defense and of a military nature for the California Medical Association.

Section 21.—Publication of Committee Reports in Pre-Convention Bulletin

Reports of the standing and special committees, as approved, deleted or modified by the Council, shall be published in a pre-convention bulletin or in the official journal of the month preceding the date of the annual session of the Association. Such reports must be in the hands of the Secretary-Treasurer at least sixty days in advance of the annual session.

If a committee fails to send in its report in proper time, the name of the committee and the names of its members shall be printed as above indicated, with a statement that the committee failed to send in its report, and the Council, subject to the approval of the House of Delegates, shall be empowered under such conditions to make such changes in the personnel of the committee as in its judgment may be deemed best.

Section 22.—Additional Committees

The House of Delegates and the Council are authorized and empowered to appoint special committees, with special instructions as to work to be undertaken, whenever it is deemed impractical or improper for the contemplated duties to be performed by a standing committee.

CHAPTER VIII.—ELECTION OF OFFICERS: TERMS

Section 1.—President-Elect—When and How Elected: Term of Office

The House of Delegates at each Annual Session thereof shall elect the President-Elect to serve until the adjournment of the final meeting of the House of Delegates at its next Annual Session. At the conclusion of the final meeting of the House of Delegates at its next Annual Session, such President-Elect shall assume the office of President, and serve as such for the term of one year thereafter, or until his successor assumes office.

Section 2.—Speaker and Vice-Speaker of House—When Elected: Term of Office

The House of Delegates shall at the Annual Session thereof elect a Speaker of the House of Delegates and a Vice-Speaker of the House of Delegates, each to serve for the term of one year, or until their successors are elected and assume office. The Speaker and Vice-Speaker shall be members of the House of Delegates at the time of their election.

Section 3.—Delegates to the American Medical Association

The House of Delegates shall elect delegates and alternates to the House of Delegates of the American Medical Association in accordance with the Constitution and By-Laws of that organization.

Section 4.—Officers Elected by House of Delegates

Those officers who under the Constitution are elected by the House of Delegates shall be elected at the second meeting of the House at the Annual Session thereof.

Section 5.—Election of Ballot: Number of Votes Necessary

(a) All elections of officers shall be by ballot; provided, that by a two-thirds vote of the members present and acting election by ballot may be waived.

(b) A majority of the votes cast shall be necessary to elect any officer.

(c) In case no nominee receives a majority of the votes on the first ballot the nominee receiving the lowest number of votes shall be dropped and a new ballot taken. This procedure shall be continued until one of the nominees receives a majority of all the votes cast, when he shall be declared elected.

Section 6.—Election of District Councilors

At least twenty-four hours prior to the second meeting at each annual session of the House of Delegates the delegates from those districts in which Councilor vacancies are about to occur shall separately meet, and in each district the delegates shall elect a chairman and a secretary. At such caucus the delegates in each district shall by nomination, secret ballot and majority vote of the delegates present elect a district Councilor from such district to serve for the ensuing term. The chairman of the district delegation shall then report at the second meeting of the House of Delegates the results of the election, and when such report is made the member elected shall thereupon assume office as a district Councilor. The time and place of the caucus of each district delegation shall, in the absence of unanimous written consent by the delegates from the district fixing time and place, be fixed by the Speaker and announced at the first meeting of the House of Delegates at each annual session. In the event that at any district caucus no person receives a majority vote for district Councilor after repeated ballots, the chairman of the caucus shall report such fact at the second meeting of the House of Delegates and shall also report the names of all nominees submitted to the caucus, whereupon the House of Delegates shall proceed to elect from such nominees the district Councilor from such district.

Section 7.—When Terms of Office of Speaker, Vice-Speaker and Councilors Begin

The terms of office of the Speaker and Vice-Speaker of the House of Delegates (which terms are herein generally stated to be one year) and the terms of office of the Councilors (which terms are herein generally stated to be three years) shall commence immediately upon the adjournment of the last meeting of the House of Delegates of the Annual Session of the Association at which such officers are elected, and shall continue up to the adjournment of the last meeting of the House of Delegates at the Annual Session of the Association of the year in which the term of office ends.

Section 8.—Officers to Hold Office Until Successors Are Elected and Assume Office

Every officer shall hold office until his successor has been elected and has assumed office either in person or by announcement.

Section 9.—Vacancies in Office

(a) In case of vacancy in the offices of both President and President-Elect, the chairman of the Council shall act as the Acting President until a President is elected at the next Annual Session of the House of Delegates.

(b) The Council by appointment shall fill any vacancy in office not otherwise provided for in the Constitution or these By-Laws, which occurs during the interval between the Annual Sessions of the House of Delegates. Such appointee shall serve until the next Annual Session and until his successor has been elected and has assumed office.

CHAPTER IX.—POWERS AND DUTIES OF OFFICERS

Section 1.—Duties of the President

The President shall preside at all meetings of the Association.

He shall appoint all committees not otherwise provided for; he shall deliver an address at the regular session at such time as may be arranged, and shall perform such other duties as custom and parliamentary usage may require, or as the House of Delegates or the Council may direct.

He shall be the real head of the profession of the state during his term of office, and, as far as practicable, shall visit, by appointment, the various sections of the state and assist the Councilors in building up the component societies, and in making their work more practical and useful. The Council shall decide what portion of the expenses incurred on his official visits shall be paid by the Association.

He shall be ex officio a member of all committees of the Association.

Section 2.—Duties of the Secretary-Treasurer, Executive Secretary and Field Representatives

The duties of the Executive Secretary and Field Representatives may be such as are delegated to them by the Council, and may be any and all duties as are specified under the various provisions of this section.

(a) *Minutes.* The Secretary-Treasurer (who may also be referred to as Secretary or Treasurer) shall attend the general meetings of the Association, the meetings of the House of Delegates, of the Council and of the Executive Committee, and shall keep minutes of their respective proceedings in separate record books.

(b) *Custodian of Records.* He shall be custodian of all record books and papers belonging to the Association. He shall have the custody of the seal of the Association.

(c) *Contracts.* He shall countersign all contracts, agreements, conveyances, transfers or other instruments to which the Association is a party, the execution of which has been authorized by the House of Delegates or Council.

(d) *Checks.* The Secretary-Treasurer shall sign and issue checks or drafts only upon vouchers approved and signed by at least two of the members of the Auditing Committee or as otherwise provided.

(e) *Advertisements in Association Publications.* The Secretary-Treasurer, subject to instructions by the Council, shall carefully examine, approve, modify or reject all material for advertising in any of the publications of the Association, and shall, in all cases of doubt, refer such proposed advertisements to the Executive Committee or the Council for decision. He shall, with the approval of the Council or the Executive Committee, execute, for the Association, written contracts relating to advertising in the form approved by the Council, subject to instructions by the Council.

(f) *Registrar at Annual Sessions.* He shall provide for the registration of the members and delegates at the Annual Session.

(g) *Index Register of California Medical Licentiates.* He shall, with the cooperation of the secretaries of the component societies, keep a card-index register of all the licensed practitioners of the state by counties, noting the status of each in relation to his component society; and shall transmit a copy of this list to the American Medical Association, transmitting to its secretary each month a report containing the names of new members and the names of those dropped from the membership roster during the preceding month.

(h) *Register of Component Societies, Their Members and Officers.* He shall keep a register of all component societies, their respective officers, and of all members of the Association, with their addresses. He shall print in the January or February issue of the official journal the number of active members of each component society as of November 1st of the preceding year.

(i) *Notices.* He shall give all notices required by the Constitution and By-Laws of this Association, or by order of the Council, or of the Executive Committee, or by law.

(j) *Correspondence and Notifications to Committees.* He shall conduct the official correspondence, promptly notifying members of meetings, officers of their election, and committees of their appointment and duties, as outlined in the motions creating such committees. Such notifications shall be made in writing.

(k) *Assistants.* He shall employ and dispense with such assistants as may be ordered by the Council. The Council by resolution may outline the scope and duties of special employees acting under the Secretary-Treasurer.

(l) *Annual and Other Report Forms.* He shall supply all component societies with the necessary forms for making their annual and other reports to this Association.

(m) *Salary.* The amount of his salary shall be fixed by the Council.

(n) *Bond.* He shall give bond in such sum as may be fixed by the Council. The Association shall pay the premium on said bond.

(o) *Duties as Treasurer.* He shall as Treasurer demand and receive all funds due the Association, together with bequests and donations, and shall promptly deposit the same in one of the depositaries thereof; and shall keep a proper and accurate record thereof, as well as of all funds disbursed by the Association.

(p) *Audits and Reports.* He shall subject his accounts to such examination or audit as the House of Delegates or Council may order.

He shall annually render an account of his work, and of the state of the funds in his hands, and make a report on the same and of his work as Secretary-Treasurer to the House of Delegates. He shall in writing also make such other reports as the House of Delegates or Council may request.

(q) *Disbursement of Association Moneys.* He shall pay out the money of the Association only upon a check or draft as otherwise provided herein.

(r) *Other Duties.* He shall perform such other duties as the Council or Executive Committee may direct.

Section 3.—Duties and Powers of the Chairman of the Council

The Chairman of the Council shall preside at all meetings of the Council. He shall sign all contracts and agreements, conveyances, transfers or other instruments (other than advertising contracts) to which the Association is a party, the execution of which has been authorized by the House of Delegates or the Council. He shall sign all checks or drafts for the disbursements of funds of the Association. He shall, on behalf of the Council, deliver its report to each session of the House of Delegates. He shall perform such other duties as may be imposed upon him by the Constitution or these By-Laws.

Section 4.—Duties of Vice-Chairman of the Council

The Vice-Chairman of the Council, in the absence or inability of the Chairman to act, shall be vested with all the powers and shall perform all the duties of the Chairman.

Section 5.—Duties and Powers of the Speaker

The Speaker of the House of Delegates shall preside at its meetings and shall perform such other duties as parliamentary usage may require. He shall appoint all committees authorized by the House of Delegates, unless otherwise provided.

Section 6.—Duties of Vice-Speaker

The Vice-Speaker shall act as Speaker in the absence of or at the request of the Speaker.

Section 7.—Duties of the Editor

The Editor and Associate Editor or Editors shall compile, edit and have charge of the official journal of the Association and such other publications as the Council or the House of Delegates may instruct him to undertake.

CHAPTER X.—FUNDS, PROPERTY, BUDGET AND ASSESSMENTS

Section 1.—Preparation of Budget

The Auditing Committee, prior to December 1 of any year, shall submit to the Executive Committee, for consideration at its December meeting, a budget under which the Association shall work in the fiscal year following the next annual session.

The Executive Committee, after consideration of the Auditing Committee's proposed budget, shall submit the same to the Council, prior to the spring meeting of the Council, with a report of its own containing suggested changes, additions or comments.

The Council in turn shall consider the two proposed budgets so submitted, and shall then make a final draft of a proposed budget for the Association, to be submitted to the House of Delegates at the next annual session.

Section 2.—Dues

(a) The Council shall recommend to the House of Delegates the amount of the annual dues or assessments of Active, Associate, Affiliate and Retired members of the Association.

(b) Honorary Members shall not be required to pay any dues or assessments, annual or special.

Section 3.—Reduction of Dues

The House of Delegates may reduce annual dues of active members, as follows:

(a) Those active members who have been in the practice of medicine for less than one year (on the first day of the calendar year for which such dues are payable), may be reduced to one-fourth regular dues;

(b) Those active members who have been in the practice of medicine for less than two years (on the first day of the calendar year for which such dues are payable), may be reduced to one-half regular dues;

(c) Those active members who have been in the practice of medicine for less than three years (on the first day of the calendar year for which such dues are payable), may be reduced to three-fourths regular dues.

Section 4.—Annual Dues and Assessments

(a) *When Payable.* The annual assessment or dues shall be payable on or before January 1 of the year for which they are levied.

(b) *County Secretaries to Collect Dues.* The secretary of each component society shall cause to be collected and shall forward to the office of the Association the dues and assessments for its members, including the annual dues and assessments for the American Medical Association.

(c) *Record of Fact of Payment of Dues.* The record of payment of dues and assessments on file in the office of the Association shall be final as to the fact of payment by a member and as to his right to participate in the business and proceedings of the Association and of the House of Delegates.

(d) *Dues of New Members; Amount Payable.* All doctors of medicine becoming active members of this Association shall pay to this Association the annual dues payable by active members for the period for which membership is obtained, except that the Council may, in its discretion, with respect to all new members who acquire membership after July 1 in each year, require payment of only one-half of the annual dues for said year. Such payment shall entitle such new member to all the rights of active membership in this Association until the end of the current calendar year.

Section 5.—Bequests, Legacies, Donations and Gifts

The Association may receive through the Council or for the benefit of the Association through any corporation which may be formed pursuant to the Constitution, such bequests, legacies, donations and gifts as the Council shall deem it proper and suitable to accept.

Section 6.—Funds and Moneys: Deposit and Withdrawal

All funds and moneys of the Association by whomsoever received shall be promptly forwarded to the Secretary-Treasurer of the Association and deposited by him in a depositary of the Association.

The Auditing Committee shall inspect all bills and no demands or claims against the Association shall be paid and no funds or moneys of the Association be withdrawn from any depositary thereof except upon written approval of a majority of all the members of the Auditing Committee on check or draft signed by any two persons authorized by the Council, providing all such authorized signers are under bond.

Section 7.—Revolving Fund

A revolving fund in such amount as may from time to time be fixed by the Council shall be deposited with the Secretary-Treasurer from which fund immediate cash demands may be paid.

Section 8.—Surplus Funds From Journal and Publications

On authorization therefor by the House of Delegates or the Council, any surplus funds arising from the operation of the official journal or other publications of the Association may be applied and used for any purposes deemed suitable or may be delivered and paid over to any corporation which may be formed pursuant to Article VIII, Section 1, of the Constitution.

CHAPTER XI.—PUBLICATIONS

Section 1.—Scientific Journal

The Association shall publish and distribute an official journal in the interest of the Association and of its members, devoted to the advancement of medical thought and science, to medical organization, and for the dissemination of medical and public health information.

Section 2.—Annual Directory

The Association may publish an annual directory of members, with such other information as the Council may direct.

Section 3.—Pre-Convention Bulletin

The Association, prior to the annual session, shall print a pre-convention bulletin, which shall contain reports of officers and committees; provided, that the Council shall have the right to delete or modify such reports, and provided further, that committees whose reports have been deleted or modified shall have the right to submit them to the House of Delegates in their original form if the committees so desire.

A copy of the pre-convention bulletin shall be given to each delegate and alternate, on or before registration.

CHAPTER XII.—REFERENDUM AND PETITION

Section 1.—Reference of Resolutions to Vote of Members

The House of Delegates may at any time, by a majority vote of those present, refer any resolution or motion pending before it to all of the active members of the Association for their vote for or against such resolution or motion. The Council may, by a two-thirds vote of all of its members and at any time within thirty (30) days after action was taken, refer any resolution or motion adopted by the House of Delegates to all of the active members of the Association for their vote for or against such resolution or motion. In addition, the Council may at any time, by a two-thirds vote of all of its members, submit any resolution or motion pending before it to all of the active members of the Association for their vote for or against such resolution or motion.

Section 2.—Form of Referendum: Arguments

The body referring any resolution or motion to the active members of the Association may, in the motion of reference, determine the form of the question to be submitted. In the event the motion of reference does not determine the form of the question to be submitted, then the form thereof shall be fixed and determined by the Council. Written arguments for and against the resolution or motion, not exceeding 1000 words each, may be submitted by any member of the Association to the presiding officer of the referring body within fifteen (15) days of the vote of reference. Such presiding officer may choose one argument on each side and same shall then be printed and mailed with the ballots.

Section 3.—Manner of Voting; Time of Voting; Canvass

All references to the membership under this article shall be by mail ballot. The time within which each member shall cast his vote may be fixed in the motion of reference, and if not so fixed shall be fifteen days from the date of mailing ballots. Each vote must be in writing and the same must be placed in a sealed envelope bearing on the corner thereof the name of the voter. The envelope shall be mailed or delivered to the Secretary's office. The canvass thereof shall be made by a committee on referendums to be appointed, in the case of reference by the House of Delegates by the Speaker of the House, and in the case of reference by the Council by the Chairman of the Council. The Secretary shall deliver to such committee all ballots timely received, and the committee shall canvass the vote and report the results thereof immediately to the Secretary.

Section 4.—Effect of Referendum

To be considered adopted, any resolution or motion submitted to the membership by referendum shall require the same proportionate affirmative vote of those voting that such resolution or motion would have required to be adopted by the body (House of Delegates or Council) from which such resolution or motion was referred. Any resolution or motion submitted to a referendum and adopted shall have the same force and effect as though adopted in the body from which it was referred, and shall be considered as having been so adopted by such body. A referendum shall not be effective or binding unless a majority of the active members vote thereon.

Section 5.—Petitions

Any 100 active members or any component society may petition the House of Delegates or Council on any matter and such petition must thereupon be heard and considered at the next ensuing regular meeting of such body.

CHAPTER XIII.—MISCELLANEOUS

Section 1.—Ethics

The principles of medical ethics as promulgated from time to time by the American Medical Association and by the California Medical Association are and shall be the principles of medical ethics of this Association and the component societies thereof, and shall regulate and govern all members thereof.

Interpretation of ethics about which any controversy may arise or exist shall be submitted to the Council of this Association, and its interpretation and ruling thereon shall be final.

Section 2.—Rules of Order

In the absence of any provision in the Constitution or these By-Laws, all meetings of the Association, of the House of Delegates, of the Council, and of committees shall be governed by the parliamentary rules and usages contained in the current edition of Robert's "Rules of Order."

Section 3.—Oath of Office

All officers and employees of the Association, upon election or appointment, shall subscribe to an oath or affirmation as follows: "I do not belong and have not belonged to any organization advocating the overthrow or change of the form of government of the U. S. A. by violent or unlawful means, nor do I belong or have belonged to any organization while it was listed, published or held to be subversive by the Department of Justice of the United States of America." If, after full hearing, the Council shall find that an officer or employee falsely subscribed to the oath or affirmation, it may in its discretion remove the officer or employee from his office or position and fill the vacancy so created.

CHAPTER XIV.—AMENDMENTS

Section 1.—Amendments—Vote and Procedure

These By-Laws may be amended by the House of Delegates at any meeting of any session thereof by the affirmative vote of at least two-thirds of the qualified members thereof present and acting; provided, that any proposed amendment has been submitted in writing to the House of Delegates at least twenty-four hours previous to being voted upon.

CHAPTER XV.—REPEAL OF ALL EXISTING BY-LAWS

Section 1.—Repeal of Existing By-Laws

All chapters and all sections of the existing By-Laws of this Association are hereby repealed, except that at the session of the House of Delegates at which these By-Laws, as a whole, are adopted, all chapters and all sections of the By-Laws in effect immediately prior to said adoption relating to the House of Delegates or to its composition and membership, or to delegates and alternates, shall remain in effect until final adjournment of such session and in addition, all resolutions or other business pending before the House of Delegates at the time of the adoption of these By-Laws shall remain before it and may be acted upon as provided in said prior By-Laws, and, except that at any session, regular or special, of the House of Delegates held in the same calendar year in which these By-Laws, as a whole, are adopted, the House of Delegates shall consist of the number of delegates provided in the prior By-Laws or in the Constitution of the Association in effect on January 1, 1951. All delegates and alternates elected to such office prior to May 12, 1951, shall continue to hold such office, regardless of the provisions of these By-Laws, until December 31, 1951.

In Memoriam

ANTON, FRANCIS L. Died at Los Angeles, July 30, 1951, aged 75, of coronary artery disease. Graduate of the University of Southern California School of Medicine, Los Angeles, 1899. Licensed in California in 1899. Dr. Anton was a member of the Los Angeles County Medical Association, a life member of the California Medical Association, and a Fellow of the American Medical Association.

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BUMGARNER, JOHN W. Died at Calistoga, July 4, 1951, aged 52, of coronary artery disease. Graduate of the University of California Medical School, Berkeley-San Francisco, 1925. Licensed in California in 1925. Dr. Bumgarner was a retired member of the Alameda-Contra Costa Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

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CAMPBELL, ROY. Died at Los Angeles, July 29, 1951, aged 56. Graduate of the College of Physicians and Surgeons, Los Angeles, 1922. Licensed in California in 1928. Dr. Campbell was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

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CRUMRINE, RALPH M. Died at Los Angeles, July 11, 1951, aged 60. Graduate of Harvard Medical School, Boston, 1925. Licensed in California in 1927. Dr. Crumrine was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

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FLETCHER, HAROLD A. Died at Kentfield, July 26, 1951, aged 63, of coronary artery disease. Graduate of Stanford University School of Medicine, Stanford University-San Francisco, 1916. Licensed in California in 1916. Dr. Fletcher was a member of the Marin County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

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FRIESEN, HENRY J. Died at Glendale, July 6, 1951, aged 71, of ventricular fibrillation. Graduate of Northwestern University Medical School, Chicago, 1910. Licensed in California in 1922. Dr. Friesen was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

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GOLDSTEIN, JOSEPH. Died at Los Angeles, June 28, 1951, aged 56, of coronary artery disease. Graduate of Stanford University School of Medicine, Stanford University-San Francisco, 1923. Licensed in California in 1923. Dr. Goldstein was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

GOLITZIN, ALEXANDER V. Died at Los Angeles, May 4, 1951, aged 75, after a long illness. Graduate of the First Moscow Medical Institute, Moscow, R.S.F.S.R., 1901. Licensed in California in 1928. Dr. Golitzin was a retired member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

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HILLARD, CARLOS G. Died at Redlands, July 21, 1951, aged 74. Graduate of Yale University School of Medicine, New Haven, 1904. Licensed in California in 1910. Dr. Hillard was a retired member of the San Bernardino County Medical Society, the California Medical Association, and an Associate Fellow of the American Medical Association.

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IGO-FLITCROFT, LOUISE M. Died at Sacramento, June 9, 1951, aged 80. Graduate of the University of Southern California School of Medicine, Los Angeles, 1906. Licensed in California in 1907. Dr. Igo-Flitcroft was a member of the Sacramento Society for Medical Improvement, the California Medical Association, and the American Medical Association.

✤

LIEN, FRED O. Died at Merced, June 23, 1951, aged 64, of cancer of the colon. Graduate of the University of Illinois College of Medicine, Chicago, 1914. Licensed in California in 1914. Dr. Lien was a member of the Merced County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

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MACE, LEWIS S. Died at Los Gatos, July 14, 1951, aged 80, after a long illness. Graduate of the New York University College of Medicine, New York, 1899. Licensed in California in 1899. Dr. Mace was a retired member of the San Francisco Medical Society, the California Medical Association, and an Associate Fellow of the American Medical Association.

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PEAKE, WILLIAM M. Died at Long Beach, June 29, 1951, aged 45. Graduate of the University of Colorado School of Medicine, Denver, 1930. Licensed in California in 1945. Dr. Peake was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

✤

SCOTT, ROBERT M. Died near Upper Lake, August 1, 1951, aged 32, in an airplane crash. Graduate of Washington University School of Medicine, St. Louis, Mo., 1944. Licensed in California in 1948. Dr. Scott was a member of the Sacramento Society for Medical Improvement, the California Medical Association, and the American Medical Association.

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SMITH, WESLEY S. Died at Glendale, July 22, 1951, aged 43, after a prolonged illness. Graduate of the College of Medical Evangelists, Loma Linda-Los Angeles, 1933. Licensed in California in 1933. Dr. Smith was a member of the San Diego County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Questions and Answers about C. P. S.

Question: Does the two-visit-deductible medical contract ever cover family dependents?

Answer: No, because this type of coverage is limited to the employee member.

There is the possibility, however, of a husband and wife both having two-visit-deductible medical coverage if both are employed and if each belongs to a C.P.S. group where each is employed.

Question: If the Medical Policy Committee or the C.P.S. Medical Director decides that an increased fee should be paid, how long on the average is required for the physicians' office to receive the adjusted payment?

Answer: The physician may normally expect the adjusted payment to be made on his next monthly payment from C.P.S. following the date of the adjustment.

Question: What is the procedure for joining C.P.S. as a physician member?

Answer: Any doctor of medicine *residing and licensed to practice in California* as a physician and surgeon may apply for physician membership in C.P.S. Application forms will be supplied upon request to any C.P.S. office. The application requires about two weeks for processing. The new member is provided with a C.P.S. physician membership certificate.

There is no requirement of a minimum period of residence in California, but in order to participate in the Veterans Program the physician must be a citizen. There is no registration fee.

Question: If I need immediate clarification on a C.P.S. member's coverage, how can I best obtain it?

Answer: If the physician's office is in Los Angeles, there are several direct lines to the medical department which C.P.S. maintains for the exclusive use of physicians. These numbers are: WEbster 3-8150, WEbster 3-8157, WEbster 3-8158, WEbster 3-8159.

Direct lines also are maintained in San Francisco. These numbers are: YUkon 6-5270, YUkon 6-5271, YUkon 6-5272, YUkon 6-5273.

In other areas, physicians should telephone the physician relations representative in the nearest C.P.S. district office, who will take all necessary information and relay it to the medical department for immediate action.

Question: Under the new C.P.S. contracts, are the $25.00 x-ray and $10.00 laboratory provisions renewable yearly for the same diagnosis?

Answer: Yes. The full amounts of these provisions are renewed each year, regardless of the conditions for which they are utilized.

Question: Does the C.P.S. payment *to the physician* for maternity services depend upon whether the patient's contract covers two or more persons?

Answer: No. It is only required that the patient is a C.P.S. member in good standing (dues paid) and that membership has been maintained for nine consecutive months under the new two-visit-deductible medical contract—or ten consecutive months under the old two-visit-deductible contract.

Question: Does C.P.S. ever pay for drugs and medications administered in the physician's office?

Answer: No. There are various drug provisions under different C.P.S. contracts, but all of them apply only when the member is hospitalized.

Question: Most of the authorizations I receive for treatment of veterans are for one month; but sometimes the authorizations cover part of one month and all of the next month. Why is this?

Answer: When a physician's request for authorization is received after the 15th of the month, the Veterans Administration realizes that, by the time it has been processed and mailed back to him, it will be too late for the physician to request authorization for the next month's treatment. In such cases, therefore, the VA issues an authorization covering the balance of the current month and all of the following month.

Question: After having received my first authorization for treating a veteran patient under the Home Town Care Program, how do I obtain authorizations for succeeding months?

Answer: C.P.S. mails Form 53C to physicians about the 15th of the month. These forms, besides serving as a reminder that reauthorizations should be requested in cases where continued treatment is necessary, provide a simple means for physicians to make the requests.

If Form 53C is not received or is lost, reauthorization may be obtained by writing or telephoning to the C.P.S. office (in San Francisco, Los Angeles or San Diego) before the end of the month covered by the previous authorization.

Physicians should keep in mind that these forms must be signed by them. C.P.S. cannot obtain authorization (or reauthorization) of treatment without the physician's signature. Finally, physicians or their secretaries should check incoming authorizations at the first of each month to be certain that requested authorizations (or reauthorizations) are on hand. If not, C.P.S. should be contacted immediately.

NEWS and NOTES

NATIONAL • STATE • COUNTY

FRESNO

The second annual session of the San Joaquin Valley Medical and Surgical Institute will be held in Fresno, Thursday and Friday, October 4 and 5, 1951.

The program follows:

THURSDAY, OCTOBER 4

8:00-9:00 a.m.—Registration: Mezzanine Floor, Hotel Californian.

Chairman of morning session, Thomas A. Collins, M.D.

9:30-10:30 a.m.—The Differentiation of Organic and Functional Complaints—Paul A. Gliebe, M.D., assistant professor of psychiatry, University of California School of Medicine.

10:30-11:30 a.m.—Essential Office Laboratory Procedures—Marcus Krupp, M.D., director, Palo Alto Medical Research Foundation and assistant clinical professor of medicine, Stanford University.

11:30 a.m.-12:30 p.m.—Current Concepts in Diagnosis and Treatment of Rheumatic States—Hilliard J. Katz, M.D., instructor in internal medicine at University of California Medical School.

12:30-2:00 p.m.—Luncheon and Round Table Discussion at Hotel Californian—Doctors Gliebe, Krupp and Katz participating; Frank W. Bailey, M.D., chairman.

Chairman of afternoon session, C. S. Mitchell, M.D.

2:00-3:30 p.m.—Practical Means of Fluid Balance Maintenance in Disease—Marcus Krupp, M.D.

3:30-5:00 p.m.—Obliterative Diseases of Blood Vessels—Edwin J. Wylie, M.D., instructor in surgery, University of California.

6:30-10:30 p.m.—Dinner, Hotel Californian. Speaker: Paul A. Gliebe, M.D.—Chronic Alcoholism.

Chairman of dinner meeting—Hugh Awtrey, M.D.

FRIDAY, OCTOBER 5

Chairman of morning session, Russell A. Donald, M.D.

9:00-10:00 a.m.—Treatment of Burns—Louis F. Ellmore, M.D., assistant clinical professor of surgery, University of Southern California; chief of burns service, University of Southern California Division, Los Angeles County Hospital.

10:00-11:00 a.m.—Injuries of the Abdominal Viscera—Orville Grimes, M.D., assistant professor surgery, University of California.

11:00-12:00 noon—Common Infections of the Ear, Nose and Throat—Lewis F. Morrison, M.D., clinical professor, department of otorhinolaryngology, University of California Medical School, San Francisco.

12:15-1:45 p.m.—Luncheon and Round Table Discussion at Hotel Californian—Doctors Ellmore, Grimes and Morrison participating; James J. Kelley, M.D., chairman.

Chairman afternoon session, Allen Turk, M.D.

2:00-3:00 p.m.—Recent Developments in Office Gynecologic Treatment—Edmund W. Overstreet, M.D., assistant professor of gynecology and obstetrics, University of California.

3:00-4:00 p.m.—Differential Diagnosis of Urological Signs and Symptoms—Donald R. Smith, M.D., assistant clinical professor, urology, University of California School of Medicine.

4:00-5:00 p.m.—Newer Approaches to the Management of Certain Obstetrical Complications—Edmund W. Overstreet, M.D.

LOS ANGELES

Dr. John Field II, professor of physiology in the Medical School on the Los Angeles campus of the University of California, has been granted a leave of absence to serve as assistant director for biological services of the newly created National Science Foundation in Washington, D. C. He will be one of four assistant directors in charge of major fields of research.

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Dr. George M. Uhl, Los Angeles City Health Officer, recently announced assignment of three physicians to department posts. **Dr. George F. Schmelzel,** district health officer of West Los Angeles District for the past eight years, was assigned the duties of district health officer for Southwest District, with headquarters at 1126 West Vernon Avenue. **Dr. Byron O. Mork** was assigned as district health officer to West Los Angeles, Venice-Westchester District, with administrative headquarters in the West Los Angeles City Hall, 1620 Purdue Avenue. **Dr. Richard W. Lewis,** in addition to other duties, was temporarily assigned as acting district health officer of Hollywood District, headquarters at 1456 North Bronson.

SAN FRANCISCO

Dr. David A. Wood, formerly associate professor of pathology, Stanford University School of Medicine, was appointed director of the Cancer Research Institute in the University of California School of Medicine, San Francisco, effective September 1. **Dr. Robert S. Stone,** professor of radiology in the U. C. School of Medicine, has been acting director of the Institute.

Dr. Wood was secretary of the Cancer Commission of the California Medical Association from 1945 to 1951, and he held a similar post with the California Division of the American Cancer Society from 1945 to 1949. He is a professional director of the American Cancer Society for Region IV.

GENERAL

Plans for the second annual series of regional medical and surgical institutes, to be held in 1951-52, have been announced by the Committee on Postgraduate Activities of the California Medical Association. The programs have been carefully planned by a local committee representative of the counties in each region and by the directors of postgraduate activities from the medical schools supplying the faculty, so that they will not only be stimulating and useful to the attending physicians but will also furnish credit hours accept-

able to such groups as the American Academy of General Practice. Five two-day meetings will be held as follows:

October 4 and 5, 1951, at **Fresno:** San Joaquin Valley Counties Regional Medical and Surgical Institute. Teaching staff under supervision of University of California School of Medicine at San Francisco.

October 25 and 26, 1951, at **Santa Barbara:** West Coast Counties Regional Medical and Surgical Institute: Teaching staff under supervision of University of Southern California School of Medicine, Los Angeles.

January 17 and 18, 1952, at **San Bernardino:** Southern Counties Regional Medical and Surgical Institute: Teaching staff under supervision of University of California at Los Angeles School of Medicine.

February 14 and 15, 1952, at **Santa Rosa:** North Coast Counties Regional Medical and Surgical Institute: Teaching staff under supervision of Stanford University School of Medicine.

April 3 and 4, 1952, at **Sacramento:** Sacramento Valley Counties Regional Medical and Surgical Institute: Teaching staff under supervision of College of Medical Evangelists, Los Angeles.

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The California Division of the American Cancer Society will hold its fifth annual conference Friday and Saturday, September 28 and 29, at the Clift Hotel, San Francisco.

W. Edward Chamberlain, M.D., professor of radiology, Temple University, and visiting professor of oncology, University of California, will deliver the principal address at a dinner meeting at 7 p.m., Friday.

The preliminary program for the meeting follows:

FRIDAY, SEPTEMBER 28

9:00-9:45 a.m.—Registration.

9:45-10:10 a.m.—Opening session—Mr. F. M. McAuliffe, president, California Division, presiding. Greetings and announcements.

10:10-10:40 a.m.—Immediate Direction of Cancer Control—Ian Macdonald, M.D., associate professor of surgery, University of Southern California.

Intermission.

10:50-12:00 noon—County Branch Round Tables (Counties will convene, separately by groups—Class I, Class II and Class III).

12:15-1:45 p.m.—Luncheon.

2:00-4:30 p.m.—County Branch Round Tables (Continuation of morning groups).

6:00 p.m.—Refreshments.

7:00 p.m.—Annual Dinner Meeting—Dr. E. M. Butt, chairman, executive committee, California Division, presiding. Concerning a Particularly Significant Finding in Cancer Research—W. Edward Chamberlain, M.D., professor of radiology, Temple University; visiting professor of oncology, University of California.

SATURDAY, SEPTEMBER 29

9:00-9:45 a.m.—Summary of County Branch Round Tables by chairmen of round table groups.

10:00 a.m.—Annual Meeting of Members—Mr. F. M. McAuliffe presiding.

11:30 a.m.—Board of Directors—Organization meeting.

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Postgraduate symposia on heart disease will be held next month in San Diego, Los Angeles and San Francisco by the respective County Heart Associations.

The San Diego County Heart Association will present its first annual postgraduate symposium October 15, 1951. The Los Angeles County Heart Association will hold its twenty-first annual symposium October 17 and 18 in the Wilshire-Ebell Theatre, and the San Francisco Heart Association will hold its twenty-second, October 24 to 27, in the Colonial Ballroom, St. Francis Hotel, and at the San Francisco Hospital.

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Dr. Travis Winsor of Los Angeles and Dr. Norman Freeman of San Francisco will be guest speakers at the Third Annual Symposium of the **Washington Heart Association** to be held October 19 to 20 in the University of Washington Medical School Auditorium, Seattle. Fields to be covered in the symposium are "Diagnosis and Therapy of Peripheral Vascular Disease" and "Surgical Treatment of Mitral Stenosis." Guest speakers on the latter subject are Dr. Robert P. Glover and Dr. O. Henry Janton, both of Philadelphia.

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Formulation of a **Bureau of Clinical Laboratory Standards** to supply highly standardized, accurate chemical solutions to its members for chemical determinations performed on body fluids has been announced by the College of American Pathologists. The purpose is to promote greater accuracy and uniformity of results by providing pathologists who do not have access to reliable materials and technical assistance with standardized solutions against which to compare solutions used in local laboratories.

The college has asked all members who direct or are responsible for clinical pathology to submit requests for the first distribution of standard solutions—three containers of dextrose standard and three of a nitrogen standard—which will be sent without charge. Requests should be addressed: College of American Pathologists, 203 North Wabash Avenue, Chicago 1, Illinois.

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Dr. Hugh H. Hussey, associate professor of medicine at Georgetown University, Washington, D. C., has been appointed associate editor of **GP**, published by the American Academy of General Practice. In announcing the appointment, Mac F. Cahal, managing publisher, pointed out that the rapid growth of the publication during the past year and a half has thrown a steadily increasing burden on the medical director, Dr. Walter C. Alvarez.

* * *

The National Gastroenterological Association will hold its Sixteenth Annual Convention and Scientific Sessions at the Drake Hotel in Chicago, September 17 to 19, 1951.

Immediately following the convention, on September 20, 21 and 22, 1951, the association will conduct a course in postgraduate gastroenterology at the Drake under the direction of Drs. O. H. Wangensteen, Minneapolis, and I. Snapper, New York.

Further information concerning the program and details of the course may be obtained by writing to the Secretary, National Gastroenterological Association, 1819 Broadway, New York 23, N. Y.

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Appointment of Dr. Wilton L. Halverson, director of the California State Department of Public Health, to head a special joint survey to evaluate the health and sanitation programs of 17 Central and South American countries was announced last month by Dr. Leonard A. Scheele, Surgeon General of the U. S. Public Health Service. Dr. Halverson has been given a six-month leave of absence from his California post, and Dr. Malcolm H. Merrill has been appointed acting director.

POSTGRADUATE EDUCATION NOTICES

UNIVERSITY OF CALIFORNIA SCHOOL OF MEDICINE—Medical Extension, Toland Hall, U. C. Hospital, San Francisco

Evening Symposia in Medicine:

Sept. 17-Dec. 17 (every Monday evening).

This is a series of evening exercises for general practitioners in the form of symposia on topics of particular interest to them. Fee: $60.00.

Contact: Stacy R. Mettier, M.D., Medical Extension, U. C. Medical Center, San Francisco 22.

UNIVERSITY OF CALIFORNIA SCHOOL OF MEDICINE, Medical Extension, Los Angeles

Therapy of Metabolic and Endocrine Disorders —855EF. Sept. 19-Dec. 28, 1951. Fee $50.00.

Meeting place: Room 113, General Medical and Surgical Hospital (Wadsworth), Wilshire and Sawtelle Boulevards, Los Angeles.

Application or requests for information concerning this course should be made to: Office of Medical Extension, University Extension, University of California, Los Angeles 24, California.

Guest Lecturers: Dr. John P. Peters, John Slade Ely professor of medicine, School of Medicine, Yale University, will deliver the initial lecture, "Salt and Water Metabolism in Health and Disease." Other lecturers include: Dr. John W. Gofman, clinical instructor in medicine, Donner Laboratory, University of California; Dr. Gilbert S. Gordan, instructor in medicine and pharmacology, University of California Medical School, San Francisco; Dr. Dickinson W. Richards, Jr., director, First Medical Division, Bellevue Hospital, New York City; Dr. John Douglas Robertson, director, Department of Clinical Investigation, The London Clinic, London, England; Dr. H. Clare Shepardson, associate clinical professor of medicine, University of California Medical School, and Dr. Howard B. Sprague, instructor in medicine, Harvard Medical School.

Obstetrics and Gynecology. October 17, 18 and 19—Intensive three-day course, 9:30 a.m. to 5:00 p.m. daily, School of Medicine, Los Angeles campus.

Recent Advances in General Surgery. Nov. 13-Feb. 11, 1952, 12 weekly evening lectures.

Guest Lecturers: Dr. Frank Glenn, Cornell University School of Medicine; Dr. Robert Elman, Washington University, St. Louis; Dr. Warren Cole, University of Illinois.

Contact: University of California Extension, Office of Medical Extension, Los Angeles 24.

Medical Stenography and Medical Office Procedures. Sept. 21 and 12 consecutive Friday meetings from 6:30 to 9:00 p.m. Extension Center, 813 S. Hill Street, Room 304.

UNIVERSITY OF SOUTHERN CALIFORNIA SCHOOL OF MEDICINE.

Full-Time Courses Beginning Sept. 17:

Internal Medicine 830. Tuition $1,000. 12 months. Starr, Petit and staff.

Cardiology and Vascular Disease 832. Tuition $1,000. 12 months. Griffith, Cosby and staff.

Gastroenterology 844. Tuition $1,000. 12 months. Wharton and staff.

Dermatology and Syphilology 860. Tuition $1,000, 12 months. Obermayer and staff.

Many of the lectures in Internal Medicine 830 are open to physicians not enrolled in the full-time course.

Evening Courses:

Los Angeles (County Hospital). 834, Electrocardiography. Sept. 17. Travis Winsor, M.D., 12 two-hour evening lectures. $50.00.

Los Angeles (Centinela Hospital). 843, Recent Advances in Diagnosis and Treatment. Sept. 13. Martin, Homann, Edmondson and staff. 12 two-hour evening lectures. $50.00.

Santa Barbara and Ventura. 842, Recent Advances in Internal Medicine. Sept. 13, Cottage Hospital, Santa Barbara. Starr and staff. 12 two-hour evening lectures. $50.00.

The following evening courses are available in any Southern California area where a sufficient number of physicians apply:

833, Cardiology
835, Theory of Electrocardiology, Advanced Course
836, Rheumatic Fever
837, Allergy
838, Hematology
839, Diagnostic Procedures in Cardiovascular Diseases
840, Pulmonary Diseases
846, Advanced Gastroenterology
847, Endocrinology
848, Diabetes Mellitus
849, Psychosomatic Medicine
850, Diseases of the Abdomen
854, Principles of Human Nutrition in Health and Disease (Open to Doctors of Dentistry)
863, Dermatology and Syphilology
865, Recent Advances in Pediatrics
869, Recent Advances in Surgery, Obstetrics and Gynecology
872, Recent Surgical Advances

For application and information, direct inquiries to Medical Extension Education, Box 158, Los Angeles County Hospital, 1200 No. State Street, Los Angeles 33, California, or call CA 1-2637 or CA 3131, Sta. 700.

INFORMATION

New Form for Reporting "Reportable" Diseases

New record forms have been distributed for use by physicians and agencies in making reports of cases of diseases which they are required to report to local health departments or to the State Health Department if there is no local health department. Simplification for quick reporting of communicable diseases is the purpose of the revision of these record forms, which include diagnostic and identifying information.

Preceding this revision, a review was made, item by item, of the information to be requested. This study, extending over almost two years, was made by a committee composed of personnel from several bureaus and services in the State Health Department, with consultation from other interested persons and agencies, including committees of the California Conference of Local Health Officers. The following criteria were used in the review: (1) To request only information essential to begin public health action or increase epidemiologic knowledge. (2) To request information in such a way that it will be easier for physicians to supply it.

The new case record form, "Confidential Morbidity Report," will replace three separate forms previously used, one to report tuberculosis, one to report venereal diseases, and one for the rest of the reportable diseases and conditions. Prepaid postage envelopes are provided so that reports of all diseases remain confidential. Previously, envelopes were used for reporting only a few of the diseases upon which reports are required.

The record forms are supplied in pads convenient for carrying. Instructions for use are printed on the inside cover of the pad and are visible while the report is being completed. A list of the reportable diseases and conditions appears on the back cover. The last card in the pad is an order form to be used for requesting more morbidity report forms.

Card Form—25 cards in a book.

CONFIDENTIAL MORBIDITY REPORT
SEND TO LOCAL HEALTH OFFICER

PATIENT'S NAME—LAST, FIRST, MIDDLE | COLOR OR RACE | SEX | AGE

PRESENT ADDRESS: STREET OR RURAL ADDRESS | CITY OR TOWN | ☐ WITHIN CORPORATE LIMITS ☐ OUTSIDE CORPORATE LIMITS

USUAL RESIDENCE IF DIFFERENT THAN ABOVE: STREET OR RURAL ADDRESS | CITY OR TOWN | COUNTY

DISEASE (IF GONORRHEA, SYPHILIS OR TUBERCULOSIS, GIVE DIAGNOSTIC DETAILS SEE INSIDE FRONT COVER FOR INSTRUCTIONS) | DATE OF ONSET

PERSON REPORTING (NAME AND ADDRESS) | DATE OF DIAGNOSIS

NAME OF HOSPITAL, INSTITUTION, SANATORIUM OR OTHER AGENCY REPORTING | IF REPORTED AFTER DEATH, DATE OF DEATH

FOR TUBERCULOSIS (ACTIVE OR PRESUMPTIVELY ACTIVE)

YEARS OF RESIDENCE IN CALIFORNIA

CHECK IF FOUND BY SMALL X-RAY FILM ☐

EXTENT OF PULMONARY TUBERCULOSIS: ☐ MINIMAL ☐ MODERATELY ADVANCED ☐ FAR ADVANCED ☐ OTHER

TUBERCLE BACILLI FOUND? ☐ YES ☐ NO

IF YES, BY WHAT TEST? ☐ SMEAR ☐ CULTURE ☐ CONCENTRATE SMEAR ☐ ANIMAL INOCULATION

STATE OF CALIFORNIA (5-1-51) FORM ACD-222 DEPARTMENT OF PUBLIC HEALTH

Printed Directions—Inside of front cover.

GUIDE FOR COMPLETION OF "CONFIDENTIAL MORBIDITY REPORT"

Color or Race: Indicate White (including Mexican), Negro, Chinese, Japanese, or if other, specify.

Gonococcus Infection: If other than Genito-Urinary, specify type.

Syphilis: State the stage of infection using the following classifications:
Primary—Chancre present, serology negative or positive, no skin or mucosal manifestations
Secondary—Skin, mucosal or other generalized manifestations present; chancre present or absent; serology positive
Early Latent—Asymptomatic infection of less than 4 years duration
Late Latent—Asymptomatic infection of 4 or more years duration
Late—Specify type: cardiovascular; skin; bone; visceral; asymptomatic or symptomatic central nervous system
Congenital—Infected before birth, with clinical evidence or a minimum of three successive quantitative serologic tests for syphilis

Tuberculosis: Indicate pulmonary or if other form, specify.

Report* cases classified in one or more of these groups (these are active or presumptively active):
1. Tubercle bacilli demonstrated by any test
2. No tubercle bacilli have been found, but
   a. Shadows characteristic of active tuberculosis on chest film, i.e., cavities, soft infiltrate, etc.
   b. Unexplained pleurisy with effusion
   c. Clinically active extra pulmonary tuberculosis: meningeal, miliary or other organ

*Do not report cases when the ONLY evidence consists of: Chest X-ray showing minimal fibrous lesions, fine linear strands, discrete hard nodules and apical scars, without history or symptoms; a positive tuberculin reaction; pulmonary calcifications, including healed primary tuberculosis; healed extra pulmonary tuberculosis.

Remarks: Space on back of card for information on place where disease contracted or other additional information.

BOOK REVIEWS

THORACIC SURGERY. By Richard H. Sweet, M.D., Associate Clinical Professor of Surgery, Harvard University Medical School. Illustrations by Jorge Rodriguez Arroyo, M.D., Assistant in Surgical Therapeutics, University of Mexico Medical School. W. B. Saunders Company, Philadelphia, 1950. $10.00.

This is a difficult book for a reviewer to report upon. The title "Thoracic Surgery" is misleading; in fact, it should be more accurately entitled "Techniques of Thoracic Surgery as Practiced by Richard Sweet, M.D."

It starts out with the concept that any qualified surgeon may become proficient in thoracic surgery by mastering the techniques described by Dr. Sweet. It makes the thoracic surgeon purely a technician. Diagnosis, pathological findings and indications for operation are entirely ignored. With the above limitations in mind one can then proceed to evaluate the work as a whole and here one can find much of value. The operations described are those found useful by the author. Discussion of the anatomy of the thoracic cage and the illustrations presented are excellent. The Jackson-Huber nomenclature was adopted for the pulmonary segments, but here, as elsewhere in the book, no credit is given to the originator of the nomenclature. Preoperative medication, preparation and anesthesia problems are well discussed. The operation of thoracoplasty is well covered. Of interest is that in the treatment of the "stove-in" chest no mention is made of the value of a local anesthetic block. Of unique value and arrangement is the outline of procedure for pneumonectomy and lobectomy on the right and left sides with back references to anatomical illustrations. It is refreshing to see that Dr. Sweet debunks "vago-vagal" reflexes and attributes these phenomena to anoxia.

The problem of cardiac arrest and its prophylaxis is very well presented. The various operative procedures under "Mediastinum" and "Esophagus" are well discussed.

Of interest in discussing esophagoplasties is the fact that no mention is made of esophageal dilatation. The excellent operation known as the Heller procedure is only referred to and in this book Dr. Sweet advocates fixation of the stomach above the diaphragm following esophagoplasty.

Viewed critically, this volume is an excellent addition to a surgeon's library where there is need for a ready reference book giving good anatomical details and outlining a few proven procedures. However, it should not be considered as being a textbook of thoracic surgery.

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BRAIN METABOLISM AND CEREBRAL DISORDERS. By Harold E. Himwich, M.D., Chief, Clinical Research Branch, Medical Division, Army Chemical Center, Maryland. The Williams and Wilkins Company, Baltimore, 1951. 451 pages. $6.00.

This is a truly monumental piece of work in which the author attempts to correlate what is known of metabolic processes in nervous tissue with normal and abnormal functioning of the human nervous system. Incomplete as this knowledge is at present, familiarity with it is of great value to every physician, and most particularly to the psychiatrist.

The various alternative metabolic pathways are considered in detail, and in a highly technical manner. However, such is the organization of the book that there is always a summary provided in relatively non-technical language for the reader not especially qualified in the particular field under discussion.

The author ventures rather beyond the borders of certain knowledge into the field of speculation, but there is nothing dogmatic about his presentation of controversial subjects. and one is stimulated by his boldness. As well as being of interest to anyone with a curiosity in regard to what we know of how the nervous system functions, the book is of tremendous value to those engaged in research in this field, since it is well documented.

* * *

CLINICAL LABORATORY METHODS—Fourth Edition. By W. E. Bray, B.A., M.D., Professor of Clinical Pathology, University of Virginia, Director of Clinical Laboratories, University of Virginia Hospital. 119 test illustrations, and 18 color plates, 614 pages. The C. V. Mosby Company, St. Louis, 1951. $7.25.

In no textbook has the reviewer ever seen more concentrated, better organized material presented in 562 pages of text than in this particular fourth edition. Most of the worthwhile and important material has been carried over from previous editions but this edition has brought the book up to date so that most of the present accepted tests of recent origin are included. Improved techniques in other examinations are also included in this edition. The Rh problem has been brought up to date and considerable improvement has been made in the study of bone marrows, the anemias, the mycoses, and bacteriology, especially in reference to the antibiotics. The book includes an excellent table of known normal values expressed in both milligrams per cent and milliequivalents. Papanicolaou's method of staining is included in the text and many very recent modifications of older tests have also been included. This book is a "must" for all pathologists, clinical pathologists, and all physicians having any interest whatsoever in laboratory procedures. It is highly recommended. Its only fault is in its illustrations. It is hoped that in future editions the author will secure the services of a qualified medical illustrator, as many of the illustrations definitely detract from an otherwise excellent book.

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DIABETES INSIPIDUS. By Harry Blotner, M.D., Associate Visiting Physician, Beth Israel Hospital, Boston, Mass. Edited by Henry A. Christian, A.M., M.D., LL.D., Sc.D. (Hon.), M.A.C.P., Hon. F.R.C.P. (Can.), D.S.M. (A.M.A.). Oxford University Press, New York. 1951. 160 pages.

This monograph presents in ideal fashion for the doctor the subject of diabetes insipidus. The introductory historical section is of great interest. This is followed by the full discussion on the physiology of thirst and water metabolism and the pathological anatomy of patients with diabetes insipidus, a comprehensive clinical description, laboratory studies and treatment. The book is well illustrated with many charts and tablets, reproductions of x-rays, etc., and there is a bibliography of 470 titles. Certainly Dr. Blotner left no stone unturned in producing a comprehensive and up-to-date discussion of this interesting subject.

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DIABETES MELLITUS—Principles and Treatment. By Garfield G. Duncan, M.D., Clinical Professor of Medicine, Jefferson Medical College. Illustrated. W. B. Saunders Company, Philadelphia, 1951. 289 pages. $5.75.

This is a monograph on diabetes. Although a number of other books have been written on the subject, this one deserves particular mention because it is written clearly and succinctly. The reviewer finds himself in general agreement with the author's ideas; even where he may not agree, he finds the ideas well presented.

The food exchanges system, recently adopted by the American Dietetic and American Diabetes Associations, is discussed at some length. Dr. Duncan has found it useful and recommends it in detail. Any physician or patient not acquainted with it may find certain difficulties in getting used to it. (The diabetic who has been taught that bread is a food to be used with caution will have to accustom himself to the thought of eating nine bread exchanges on a 1,700-calory diet.) In the text the number of calories in each of the food exchanges is sensibly rounded off to the nearest 5 or 0. This is not true of Table 15 on page 112, which summarizes the composition of food.

The author is to be commended for emphasizing the fact that foods which are best for other members of the family are best for diabetics too, and that there is rarely need for these patients to have special diabetic foods.

The book is endorsed as an excellent guide for the internist or general practitioner who treats diabetics, as well as for the medical student who is learning about this subject.

* * *

ELECTROENCEPHALOGRAPHY IN CLINICAL PRACTICE. By Robert S. Schwab, M.D., Director of the Brain Wave Laboratory, Massachusetts General Hospital. Illustrated. W. B. Saunders Company, Philadelphia, 1951. 195 pages. $6.50.

This book presents in very concise form what the practitioner should know about the procedure of electroencephalography. The usefulness of the procedure is conservatively evaluated, and if all physicians who request electroencephalograms on their patients were familiar with the material presented the lot of the electroencephalographer would be greatly alleviated. The various abnormalities and their significance are enumerated, without, however, the many illustrations to be found in the more ambitious atlases on the subject.

Although the author specifies that this is not to be considered a text on the subject, in the reviewer's opinion it can well serve as such. It is simply and clearly written, and presents both the theoretical and practical aspects. It can be highly recommended both to the physician who uses electroencephalography and to the electroencephalographer who is setting up a laboratory.

* * *

YOUR SINUS TROUBLES AND TREATMENTS — An Authoritative Explanation for the Layman, with Recommendations for the Treatment of Your Sinus Conditions, Colds, Hay Fever and Other Allergies. By Friedrich S. Brodnitz, M.D. Abelard Press, 381 Fourth Avenue, New York, 1950. 243 pages. $2.50.

The book presented as an authoritative explanation for the layman, is a volume of 243 pages of acceptable paper and satisfactory type. The introduction is interesting and sheds considerable light on the personality and mental attitude of the author. It contains a significant statement to the effect that he has a hoard with medical illustrations on the wall of the treatment room that has served him well in enlightening patients about the localization and the mechanics of their afflictions. The book was born of a desire to put daily piecemeal lectures into writing. The statement that "There is nothing worth knowing in science than cannot be explained in everyday language" is immediately followed by one to the effect that a certain number of medical terms proved unavoidable. This was made acceptable on the basis that the reader will find the origin and meaning of each unavoidable medical term explained the first time it is used. In general the author has followed this plan.

Any attempt to present for the layman a clear-cut, useful mental picture of the anatomy, physiology and function of the normal nose and sinuses to say nothing of associated pathology, diagnosis and treatment of and for these structures in this allotted page space is doomed to failure. Add to these the subject of allergy and the use of antihistamine drugs and it becomes evident that the dilution factor of incorporated subjects precludes any opportunity for detailed discussion.

There is no question as to the author's knowledge of the subjects and material. In the few instances when he deviates from the role of speaking lay language as he thinks the layman would use it he is delightful. Most of the rest of the time one has the unpleasant feeling that one is being talked down to. This is truly unfortunate, in that the reviewer believes this is the last thing the author would wish to infer. There are evident attempts to retain the reader's attention by employing known literary artifices. Unfortunately, the subtlety of the artist was not employed to wholly disguise the attempts to regenerate interest. One cannot recommend this book to the general lay reader as the answer for his questions about sinus trouble and treatments.

* * *

MEDICINE OF THE YEAR—1951. By John B. Youmans, M.D., Editor, Dean, School of Medicine, Vanderbilt University.

"Medicine of the Year" is presented with a view to providing current information useful to the doctor in the practice of medicine. The publication is generally good. It contains abstracts of the literature by specialists for the benefit of the general practitioner. The subject matter is rather highly selective, according to the viewpoints of the editors of the respective sections. Because of its limited size, this series is much less complete than such a comparable review as the Year Books of Medicine and Surgery. Each section of abstracts has its own summary, the reading of which will allow the physician to predict what he will find in the subject matter proper.

There are certain defects which should be pointed out. The abstracts too frequently give too much of the opinions of the authors or the editors, and not enough of the meat of the article summarized. There is a lack of balance in the amount of space allowed to the different sections and in the manner of presentation. For example, the section on internal medicine abstracts 81 articles in 18 pages and does it in a clear concise manner, although the reader often will have to look up the original article in order to make use of the information. On the other hand, the section on obstetrics and gynecology abstracts 70 articles in 50 pages and presents its subject matter in considerable detail.

* * *

MANAGEMENT OF CELIAC DISEASE. By Sidney Valentine Haas, M.D., Professor of Pediatrics and Director of the Department, New York Polyclinic Medical School and Hospital; and Merrill Patterson Haas, M.D., J. B. Lippincott Company, Philadelphia, 1951. 188 pages. $5.00.

This monograph embodies the results of an enormous personal experience and of a very comprehensive survey of the literature. The senior author, Dr. Sidney V. Haas of New York, professor of pediatrics at the New York Polyclinic Hospital, now in his 81st year, has been a life-long student of the disease and is particularly well known for having established the value of banana in its treatment. Probably no other living man has had so large a personal experience with celiac disease; he records 603 cases, of which 370 were treated long enough to permit conclusions.

There is an interesting and exhaustive historical review. Celiac disease was described and given its name by Aretaeus the Cappadocian who wrote in the first century of the Christian era; he also recommended treatment with the

"juice of the plaintain," a member of the banana family. The classic description by Samuel Gee, published in 1888, is fully cited; as, among others, are those of Christian Herter on intestinal infantilism (1908) and of Howland (1921). Haas introduced banana in 1923—a method of treatment still generally employed. The symptoms are considered in great detail, the authors' scheme of treatment is presented and the course and prognosis discussed. At the end their etiologic hypothesis is offered. This hypothesis refers the primary manifestations of the disease to irritants produced in the intestine from polysaccharides in the diet, resulting in increased motility and impaired absorption. The authors believe that the diagnosis can be firmly based on three points: (1) a prolonged, intermittent diarrhea; (2) exclusion of other diseases by means of clinical pathologic tests; and (3) correction of the diarrhea by "carbohydrate-specific diet" and of recurrence of diarrhea by inclusion of carbohydrates other than those found in fruits and vegetables.

It is fair to say that today pediatric opinion has generally accepted the separation of celiac disease and pancreatic fibrocystic disease as distinct entities, the latter distinguished by characteristic pathologic changes, deficiency of pancreatic secretion, and the regular occurrence of pulmonary changes. The authors, however, do not fully accept the distinction. They not only question the diagnostic validity of the test for trypsin in the duodenal contents and of the pulmonary changes as an essential part of the disease but go so far as to say, ". . . we have come to one very positive conclusion. That is, if cystic fibrosis of the pancreas is treated by the same dietary regimen that is used in celiac disease, the diarrhea will cease, nutrition will become normal, and *if the pulmonary infiltration has not become too severe*," (our italics) "it too will clear up." The proof which they offer of this thesis is far from convincing, consisting of two cases, one of which never showed pulmonary symptoms and the other still having "a chronic cough" after six years. It is interesting to note that in their review of the literature on pathology, nearly all of the abnormalities noted are those of pancreatic cystic fibrosis. One wonders how many of the authors' cases actually belonged to that category and to what extent their discussions and clinical descriptions are vitiated by inclusion of both groups of cases.

The volume must therefore be recommended with reservations. Its bibliography (668 items) and review of the literature are exhaustive and of great reference value. The plan of treatment for celiac disease itself is simple and clearly effective, but its complete applicability to fibrocystic disease may certainly be questioned. Only four lines are devoted to antibiotics, without detail. The material is clearly presented and highly readable, but on the whole the value of the book is restricted by its devotion to a questionable unitarianism and by its minimization of widely accepted contrary views.

There is a brief index.

* * *

SURGICAL FORUM—Proceedings of the Forum Sessions, 36th Clinical Congress of the American College of Surgeons, Boston, Mass., October 1950. By the Surgical Forum Committee. W. B. Saunders Company, Philadelphia, 1951, 665 pages. $10.00.

This volume is a compilation of the papers presented before the Forum on Fundamental Surgical Problems at the 1950 Clinical Congress of the American College of Surgeons. It contains 165 articles and abstracts by 393 authors and represents an important cross-section of the surgical research accomplished in 1950. (Unfortunately, some of the forum's most important papers are represented only in abstract.) In general, the authors have prepared papers with rigorous controls and methods, careful selection of data and concise presentation of results. Surgical physiology receives the greatest attention, with the majority of papers on experimental techniques and principles which will require considerable translation before they are of practical use to the surgeon. This book will be of greatest value to those interested in the investigative aspects of surgery.

The volume is divided into 12 sections representing important specialties and viewpoints in surgery. Lacking appropriate representation are the fields of urologic, orthopedic, and gynecologic surgery. Attempts to improve the results of radical extirpative surgery are reflected by papers on resection of the trachea with replacement of defects by homotransplantation; radical total gastrectomy with replacement of the stomach by a transplanted pouch of right colon; and planned re-explorations of patients whose primary tumors were found at the original resection to have extended to the regional lymph nodes. Cardiac and thoracic surgery have received much attention; cardiac arrest, ventricular fibrillation, cardiac massage, and various techniques for accomplishing extracardiac vascular shunts are prominently discussed.

The attempts to extend neurosurgical ablation in the treatment of non-neoplastic craniocerebral disease are well represented. Several authors explore the use of radioactive iodine and potassium in the localization of intracranial neoplasms. The importance of tracheotomy in the care of craniocerebral trauma is stressed. Recurrence of vasoconstrictor activity after sympathectomy was found to be less when ganglionectomy was performed than when a preganglionic or postganglionic sympathectomy was done. Robertson and Smithwick's late results following lumbar and various forms of dorsal sympathectomy are presented only in abstract.

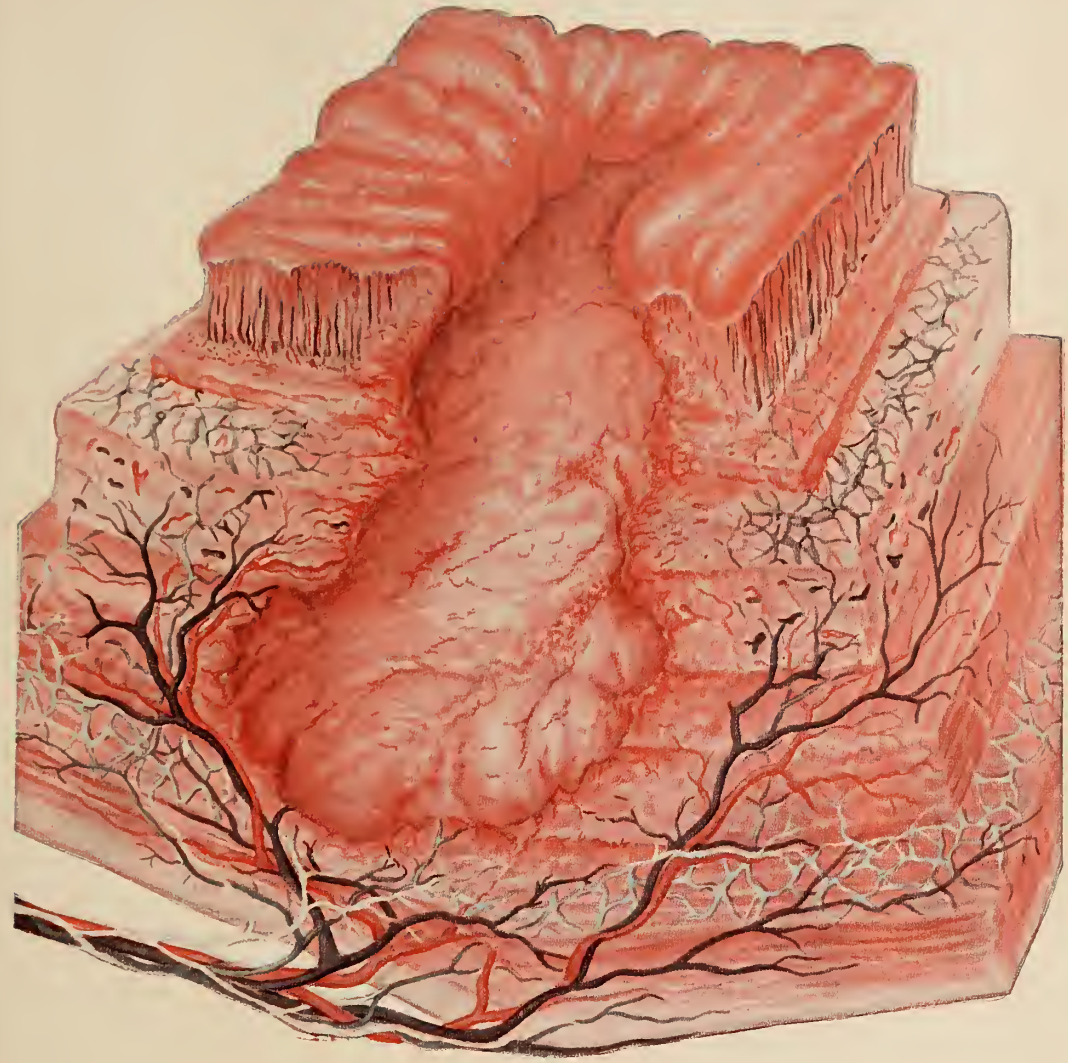
Authors studied different phases of the homotransplantation problem, using blood vessels, skin, bone, endocrine tissues, and trachea, and different techniques of storage and preservation. The use of intra-arterial transfusions in shock is discounted where adequate prompt venous replacement can be accomplished. The role of the adrenal cortex and of the hepatic and portal "pool" in shock is also discussed. The frequency of carbon dioxide retention under anesthesia is shown by continuous analysis of the expired gases. Curare is implicated in the abolition of appropriate respiratory adjustments to asphyxia, in addition to its peripheral effects. A hypertensive reflex response is elicited by the simple manipulation of the epiglottis during intubation under light anesthesia. Also stressed are the deleterious possibilities of the excessive manipulation of the sympathetic chain during sympathectomy, and the dangers attendant upon the use of ether in sympathectomies for peripheral vascular disease.

* * *

A STUDY OF EPILEPSY IN ITS CLINICAL, SOCIAL AND GENETIC ASPECTS. By Carl Henry Alström. Acta Psychiatrica et Neurologica, Supplementum 63. Ejnar Munksgaard, Norregade 6, Copenhagen, 1950.

This monograph is of greater interest to the neurologist than to physicians in general. It gives rather a clear insight into the incidence of the convulsive state in Sweden and the facilities there available for diagnosis and therapy. The first portion of the volume deals in extenso with classification, and quotes various authorities who are in disagreement. The genetic aspect of epilepsy is dealt with at length.

Apparently there has been a law in Sweden since the eighteenth century forbidding marriage of idiopathic epileptics; since in the face of such legislation the incidence of seizures in this country seems quite comparable with that in the world at large, it would seem rather evident that heredity is not an extremely important factor in the etiology of the convulsive states.



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HURRY AND WORRY CLASSED AS TWIN MENACES TO HEALTH

Hurry and worry, twin by-products of modern living, are a menace to health, a Philadelphia surgeon, Dr. Albert P. Seltzer, writes in a recent issue of *Today's Health*, published by the American Medical Association.

"Hurry quickens the pace not only of the job on hand, but of the human organ systems," he says. "Pulse, respiration, and blood pressure are all increased in the hurrying man. The body is not made to be a racing machine. Above the pace the body was created to accomplish easily, strain begins to show in the bodily parts. An automobile engine, pushed beyond normal capacity, wears out too soon; so does the human body. And whereas an engine can be replaced for a few hundred dollars, the human body cannot.

"Worry affects the body like hurry. It increases vital functions. Worry is normal under stress and is intended by nature to help a person conquer unusual or dangerous circumstances. When it is applied more or less constantly rather than at rare moments, it wears out the body. It disturbs the whole nervous system, producing unnecessary strain throughout the body."

The diseases caused by hurry and worry are many, he says. They include some of the most serious physical ailments and some of the most common. Among these are coronary thrombosis, a form of heart disease in which a blood clot forms in the arteries that supply the muscles of the heart; high blood pressure, hardening of the arteries and angina pectoris, another heart symptom marked by a sharp pain in the chest.

Hurry and worry, he says, also can strike other parts of the body, the digestive tract for example. He adds:

"Various forms of dyspepsia and nervous indigestion are common. While not serious in themselves, these conditions can cause considerable disability. The average adult consumes a scanty breakfast and skimpy lunch, both nutritionally inadequate and eaten on the run. We eat too quickly in crowded, noisy places, with the radio issuing its ominous reports at us the while. In addition, we bedevil our digestive tracts with vast quantities of coffee, alcohol and tobacco, all conducive to dyspepsia. Few people eat foods that encourage normal bowel function, and the call to stool is as rushed and haphazard as the other feverish activities of the hectic day."

The digestive disease most typically attributable to hurry and worry is peptic ulcer, which attacks the wall of the stomach or the adjoining part of the intestines, he says. Nervous and mental ailments are other results.

"The hurry-worry diseases," he says, "strike most commonly at business men, executives, doctors, lawyers, clergymen, teachers, scientists, politicians, high-ranking military and naval officers, writers, artists and entertainers—in fact, many of those whose lives are full and profitable."

He says ambition and hard work are to be en-

(Continued on Page 56)

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HURRY AND WORRY CLASSED AS TWIN MENACES TO HEALTH

(Continued from Page 50)

couraged but that hard workers also must learn how to relax, adding:

"No matter how full a person's schedule, he must take time out for certain important things. He must eat in leisure, relaxing for a little while before and after meals. One or two nights a week should be set aside for recreation. Sufficient sleep is essential. Adequate vacation time and sensible outdoor exercise are not an indulgence but an investment. This applies to the busiest executive, to the man with the most irons in the fire; in fact, it is more important for this man.

"Worry is an even more insidious enemy than hurry. Anxiety is an enemy to physical and emotional health. When disturbing problems arise, face them and analyze them. If a problem can be solved by direct action, it should be solved at once. If a trivial problem is not readily solved, it should be dismissed from the mind. Some problems cannot be immediately solved or forgotten; these are the dangerous ones."

A great deal of the hurry and worry can be prevented by planning ahead, he says. He concludes:

"Maintain the calm, serene attitude of mind. Enjoy the present and prepare for the future. Don't hurry. Don't worry. Live instead."

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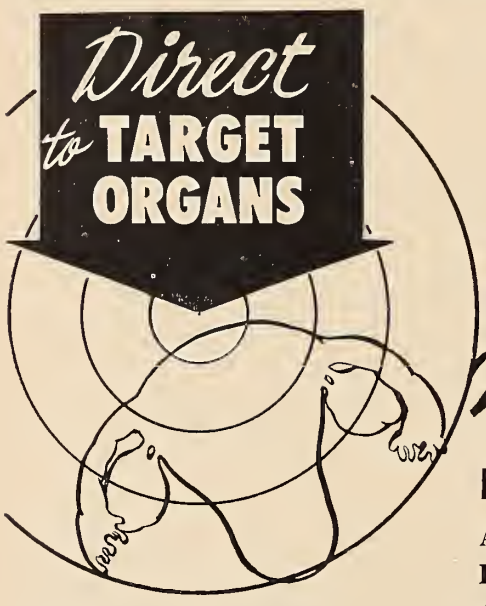

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A.M.A. SECRETARY'S LETTER

Committee to Study Organization Structure. In accordance with a resolution adopted by the House of Delegates in Atlantic City, Speaker Francis F. Borzell officially has notified five physicians of their appointment to a "Committee to Review the Organizational Structure of the Standing Committees of the House of Delegates."

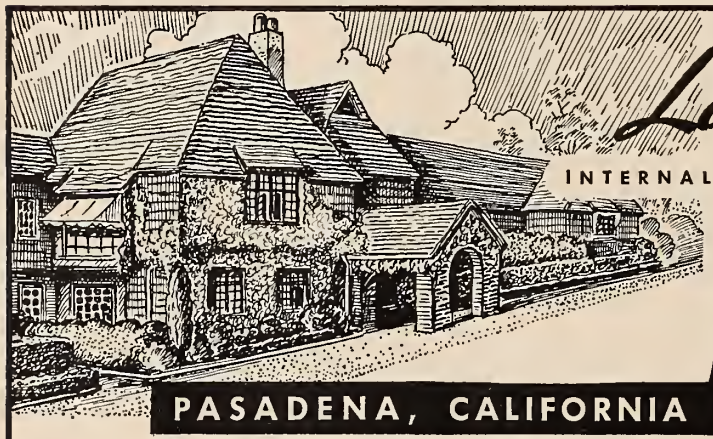
The five are: Robertson Ward, San Francisco, chairman; Harold B. Gardner, Pittsburgh; Edgar V. Allen, Rochester, Minn.; George A. Unfug, Pueblo, Colo., and Warren W. Furey, Chicago.

In addition, the president, secretary and vice-speaker of the House of Delegates will serve as ex-officio members, without vote.

The reference committee report adopted by the House read: "Resolved, that a special committee of the House of Delegates be appointed by the Speaker to review the organizational structure of the standing committees of the House of Delegates, especially in their relation to the Board of Trustees, and report to the House of Delegates at the next interim session in Los Angeles."

Physicians' Bulletin Discusses A.M.A. Dues. A recent issue of the Physicians Guild Bulletin of

(Continued on Page 68)



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A.M.A. SECRETARY'S LETTER

(Continued from Page 62)

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"Before branding the A.M.A. unfit . . . and that's what you do when you don't pay your dues . . . why not think twice? After all, it is your only nationally organized society seeking to improve your welfare. To refuse financial support weakens the A.M.A.'s position before the public.

"Pay your dues and pitch in if you've got a gripe . . . but *do it from the inside!*"

Study Health Aspects of Military Training Law. A subcommittee of the A.M.A. Council on National Emergency Medical Service has been appointed to study the medical and health aspects of the universal military training law signed by the President on June 19. The committee consist of Drs. R. L. Sensenich, South Bend, chairman; Harold S. Diehl, dean of the University of Minnesota Medical School, and Richard L. Meiling of Washington.

This committee, along with Dr. James C. Sargent,

(Continued on Page 69)

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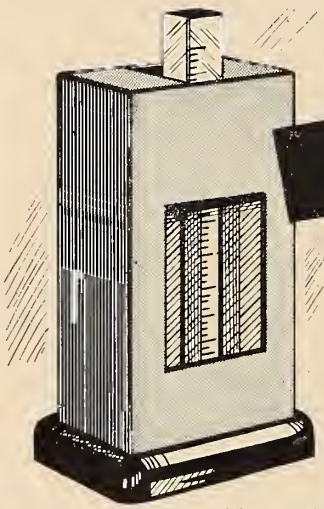

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A.M.A. SECRETARY'S LETTER

(Continued from Page 68)

Milwaukee, chairman of the council, held its first meeting in the capital on June 29.

The law established, among other things, a five-man commission known as the National Security Training Commission, which is empowered and directed to submit within four months a plan for the conduct of universal military training.

At the Atlantic City session, the Board of Trustees approved a resolution by the council authorizing it to conduct a study of the medical and health problems and responsibilities, both military and civilian, involved in universal military training.

Food and Drug Administration Names Allergy Advisory Group. Another liaison committee to advise Food and Drug Administration in its work has been appointed. It will be concerned with allergies; its five members have been recommended by the American Academy of Allergy. Chairman is Dr. Leo H. Criep, associate professor of medicine at University of Pittsburgh. Others are: Dr. Frederick Robert Brown, head of allergy clinic at Bellevue Hospital, New York City; Dr. Edmund L. Keeny, specialist in internal medicine and allergy consultant at Naval Hospital, San Diego; Dr. Irwin C. Schumacher, chief, adult allergy clinic, University of California Hospital, San Francisco, and Dr. Adolph Rostenberg, Jr., allergy unit, University of Illinois College of Medicine, Chicago.

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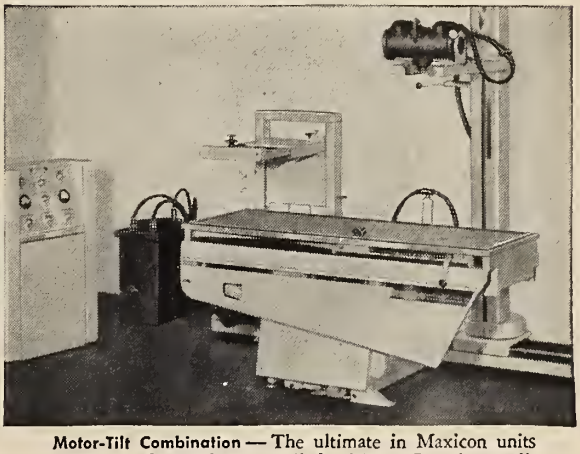

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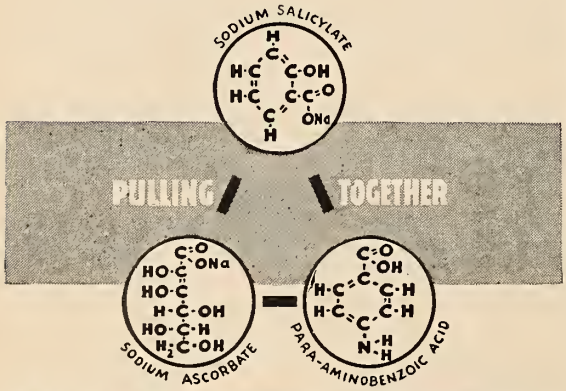

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BOOKS RECEIVED

ATLAS OF ANATOMY, AN—Third Edition. By regions—Upper limb, abdomen, perineum, pelvis, lower limb, vertebrae, vertebral column, thorax, head and neck, cranial nerves and dermatomes. J. C. Boileau Grant, M.C., M.B., Ch.B., F.R.C.S. (Edin.), Professor of Anatomy in the University of Toronto. The Williams and Wilkins Company, Baltimore, 1951. 657 pages (637 pages of figures and 20 pages of index). $12.00.

ATLAS OF CROSS SECTION ANATOMY OF THE BRAIN—Guide to the Study of the Morphology and Fiber Tracts of the Human Brain—Fifth Section of Emil Villiger's "Brain and Spinal Cord"—14th Edition. Revised by Eugen Ludwig, Professor of Anatomy, University of Basel. Atlas further revised by A. T. Rasmussen, Professor of Anatomy, University of Minnesota. The Blakiston Company, Philadelphia, 1951. 63 plates. $5.00.

AUTOBIOGRAPHY OF A SCHIZOPHRENIC GIRL—Reality Lost and Regained—with Analytic Interpretation—Marguerite Sechehaye (translated by Grace Rubin-Rabson). Grune and Stratton, New York, 1951. 161 pages. $3.50.

CLINICAL AND ROENTGENOLOGIC EVALUATION OF THE PELVIS IN OBSTETRICS—Howard C. Moloy, M.D., M.Sc., Assistant Clinical Professor of Obstetrics and Gynecology, College of Physicians and Surgeons, Columbia University. W. B. Saunders Company, Philadelphia, 1951. 119 pages, 68 figures. $2.50.

CLINICAL PEDIATRIC UROLOGY—Meredith Campbell, M.S., M.D., F.A.C.S., Professor of Urology, New York University Postgraduate Medical School. **With a Section on Nephritis and Allied Diseases in Infancy and Childhood** by Elvira Goettsch, A.B., M.D., Associate Professor of Pediatrics, University of Southern California School of Medicine; and John D. Lyttle, A.B., M.D., late Professor of Pediatrics, University of Southern California School of Medicine. W. B. Saunders Company, Philadelphia, 1951. 1,112 pages with 543 figures. $18.00.

DISEASES OF THE ENDOCRINE GLANDS. Louis J. Soffer, M.D., Assistant Clinical Professor of Medicine, Columbia University. 88 illustrations and 3 colored plates. Lea and Febiger, Philadelphia, 1951. 1142 pages. $15.00.

ENDOSCOPY—As Related to Diseases of the Bronchus, Esophagus, Stomach, and Peritoneal Cavity—Edward B. Benedict, A.B., M.D., F.A.C.S., Assistant Clinical Professor of Surgery, Harvard Medical School. The Williams and Wilkins Company, Baltimore, 1951. 373 pages. 128 illustrations and 13 color plates. $10.00.

FROM A DOCTOR'S HEART—Eugene F. Snyder, M.D. The Philosophical Library, New York, 1951. 251 pages. $3.75.

FRONTAL LOBOTOMY AND AFFECTIVE BEHAVIOR—A Neurophysiological Analysis—John F. Fulton, M.D., Sterling Professor of Physiology, Yale University. W. W. Norton & Company, New York, 1951. 159 pages, $3.00.

GOOD FOOD FOR BAD STOMACHS—500 Delicious and Nutritious Recipes for Sufferers from Ulcers and Other Digestive Disturbances—Sara M. Jordan, M.D., Gastroenterology Department, Lahey Clinic, Boston; and Sheila Hibben, New York. Doubleday & Company, Inc., 575 Madison, New York 22, N. Y., 1951. $2.95.

LOW SODIUM DIET — A Manual for the Patient — Thurman B. Rice, A.M., M.D., Professor of Public Health, Indiana University School of Medicine. Lea & Febiger, Philadelphia, 1951. 103 pages. $2.75.

MANAGEMENT OF FRACTURES, DISLOCATIONS, AND SPRAINS, THE—Fifth Edition—John Albert Key, B.S., M.D., Clinical Professor of Orthopedic Surgery, Washington University School of Medicine; and H. Earle Conwell, M.D., F.A.C.S., Associate Professor of Orthopedic Surgery, University of Alabama School of Medicine. The C. V. Mosby Company, St. Louis, 1951. 1,232 pages. $16.00.

METABOLIC METHODS — Clinical Procedures in the Study of Metabolic Functions—C. Frank Consolazio, Chief of Biochemistry, United States Army, Medical Nutrition Laboratory, Chicago, Ill.; Robert E. Johnson, M.D., D.

(Continued on Page 80)

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(Continued from Page 76)

Phil. (Oxford), Professor and Head of the Department of Physiology, University of Illinois, Urbana, Ill.; and Evelyn Marek, M.A., Biochemist, United States Army Medical Nutrition Laboratory, Chicago, Ill. The C. V. Mosby Company, St. Louis, 1951. 471 pages. $6.75.

ODYSSEY OF MODERN DRUG RESEARCH, THE—Robert Burlingham. The Upjohn Company, Kalamazoo, Mich., 1951.

PEDIATRIC MANUAL FOR MOTHERS—Questions and Answers on the Care and Feeding of Infants and Children—Harry R. Litchfield, M.D., and Leon H. Dembo, M.D., Grune & Stratton, New York, 1951. 269 pages. $2.50.

PHARMACOLOGIC PRINCIPLES OF MEDICAL PRACTICE—Second Edition—A Textbook on Pharmacology and Therapeutics for Medical Students, Physicians, and the Members of the Professions Allied to Medicine—John C. Krantz, Jr., Professor of Pharmacology, School of Medicine, University of Maryland; and C. Jelleff Carr, Associate Professor of Pharmacology, School of Medicine, University of Maryland. The Williams and Wilkins Company, Baltimore, 1951. 1,116 pages. $10.00.

POISONS—Their Isolation and Identification—Frank Bamford, B.Sc., Late Director of the Medico-Legal Laboratory, Cairo. Third Edition revised by C. P. Stewart, D.Sc., Ph.D., Reader in Clinical Chemistry, University of Edinburgh. 23 illustrations. The Blakiston Company, Philadelphia, 1951. 316 pages. $5.50.

VISCERAL RADIOLOGY. Emerik Markovits, M.D., Formerly Scientific Collaborator of the Central Radiologic Institute of the General Hospital, Vienna; Head of the Radiologic Department of Elizabeth Hospital of the City of Budapest; Radiologist of the Steiner Cancer Clinic, Atlanta, Georgia. The Macmillan Company, New York, 1951. 612 pages. $24.00.

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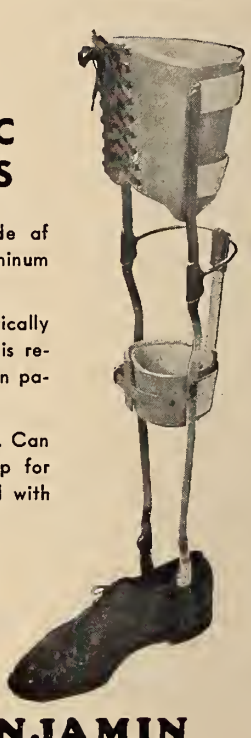

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FORCED BREATHING DISTURBS BODY FUNCTIONS, REPORT REVEALS

Forced breathing, with a resultant overventilation of the lungs, may disturb the normal body metabolism and cause distress, according to a report of three Chicago doctors carried in a recent issue of the *Journal of the American Medical Association.*

Drs. Theodore H. Sattler, Gilbert H. Marquardt and George M. Cummins, Jr., associated with the Northwestern University Medical School and Wesley Memorial Hospital, cited three cases where the patients' complaints of dizziness, headaches, constriction of the throat and chest and other symptoms were traced to excessive breathing.

"Breathing in excess of the physiological requirements," they said, "removes excessive quantities of carbon dioxide from the blood and tends to produce alkalosis.

"Hyperventilation may be severe enough to overcome the compensatory mechanisms, and the pH of the blood then rises above the accepted upper limit of normal (7.45). Symptoms that result include tingling of the fingers and toes, numbness of the face followed by carpopedal spasms and ultimately by generalized spasms, convulsions, and delirium and disorientation."

A 31-year-old woman admitted to the hospital complained of frequent attacks of shortness of breath, associated with dryness of mouth, a tight feeling in her chest, numbness of lip, dizziness and headache. Typical attacks were reproduced when

(Continued on Page 90)

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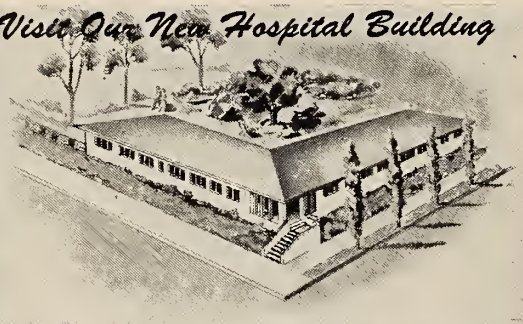

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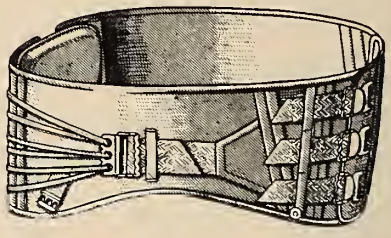

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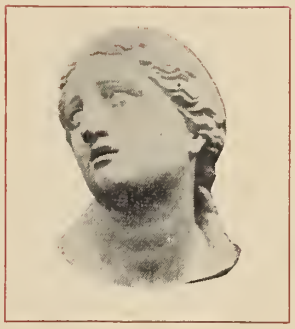

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1. Freed, S. C.: Insurance Medicine 15:21, 1950. 2/1634M

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FORCED BREATHING DISTURBS BODY FUNCTIONS, REPORT REVEALS

(Continued from Page 86)

the patient was asked to breathe heavily for 10 minutes. In the two years after her dismissal from the hospital she has had occasional mild symptoms which she easily dissipated when she consciously slowed her rate of breathing.

A 56-year-old woman with similar complaints was put through the same test with like results. She has remained free of distress for 21 months.

A 40-year-old man under treatment for rheumatic heart disease became irrational, singing and talking constantly and incoherently. Because of the pronounced increase in his breathing rate, the blood was tested and alkalosis shown. Ammonium chloride therapy was instituted and the patient was completely rational 24 hours later. No further episodes were encountered in the three months after discharge from the hospital.

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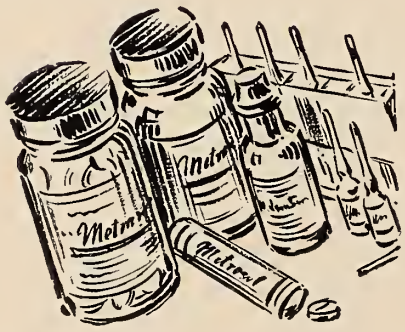

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You can live with your ulcer if you can learn to relax and enjoy life. This may involve some changes in diet and the elimination of such things as smoking, liquor and hot dogs, but these sacrifices will be worth while.

So said Dr. Paul Wermer of Chicago in an article in a recent issue of *Today's Health*, published by the American Medical Association. Dr. Wermer is secretary of the Committee on Research of the A.M.A.'s Council on Pharmacy and Chemistry.

About 5 per cent of the population eventually will become victims of peptic ulcer, he said. The disease occurs usually in hard-driving, intelligent and conscientious persons when under undue stress.

Peptic ulcers are open sores in two organs, the stomach and the duodenum, the first part of the intestine. Those of the stomach are called gastric ulcers; those of the duodenum, duodenal ulcers. These areas are bathed in the stomach juices, which contain pepsin. Pepsin is present in both types and for that reason they are called peptic.

Their cause never has been determined definitely. One theory is that severe emotional and nervous strain causes a disturbance of the nerve supplying the stomach. This nerve, known as the vagus, influences the blood supply of the stomach lining.

"In some manner, the blood supply to a small area of the stomach is sharply diminished, causing damage," Dr. Wermer pointed out. "The stomach juices and ferments do the rest.

"All authorities agree that two conditions must exist for a peptic ulcer to develop. First, there must be an injury or damage to the mucous membrane, or lining of the stomach. Second, there must be ample stomach juices containing acid and a digestive ferment, pepsin.

"In the presence of these conditions, the stomach juices treat the damaged area almost as if it were food. They try to digest it. Furthermore, the action of the acid juices on the ulcer stimulates the stomach to manufacture more digestive juice. If nothing is done, the ulcer can actually be digested through the stomach wall and cause a perforation. This occurs more rarely with duodenal ulcer. Only emergency measures will do in such a case.

"But, perforation can occur only if the patient neglects the rules of medication and diet that the physician has prescribed."

By modern-day methods, most ulcers can be controlled adequately through medication and without resort to surgery, provided the patient is cooperative, Dr. Wermer said. The doctor will prescribe something to counteract the acidity of the stomach juices and suggest a diet which will not upset the delicate chemical balance of the body. He also will advise what must be done to relieve nervous tension.

How soon relief of the ulcer pain may be expected depends upon the patient's willingness to obey orders. It may be a week or 10 days, even earlier in some cases. But, Dr. Wermer stressed, relief does not mean cure. The doctor will have to watch the ulcer crater with repeated fluoroscopic and x-ray examinations. As conditions improve, diet and other restrictions will be liberalized.

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NEUROLOGIST SAYS EPILEPTIC IS PILLORIED UNJUSTLY

The epileptic is unfairly pilloried in public opinion and law, according to Dr. William G. Lennox, a Boston neurologist, writing in a recent issue of the *Journal of the American Medical Association.*

Dr. Lennox, who is assistant professor of neurology at the Harvard Medical School and with the Children's Medical Center in Boston, said advice regarding marriage and children in such cases must be individualized.

"Assets that are transmissible, such as sound vital organs, good intellect, personality and social responsibility, may outweigh the liability of a tendency to seizures," he said.

"On the basis of family histories, the hereditary factor in epilepsy appears to be approximately the same as that in diabetes, one-half that in obesity and one-eighth that in migraine, but no state has as yet forbidden migrainous persons to marry. Unjustified discrimination in this case is born of fear. The success of present-day therapy of seizures should reduce both fear and discrimination."

He reported on a study of the history of epileptic seizures, if any, of 20,000 near relatives of 4,231 epileptic patients. The incidence in these was 3.2 per cent.

Dr. Lennox concluded that the child of the average epileptic parent has a 30 to 1 chance of remain-

(Continued on Page 18)

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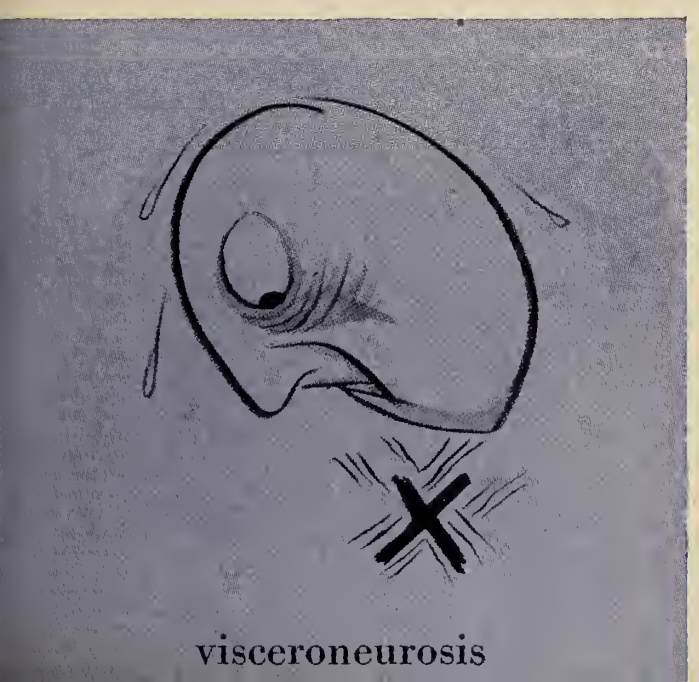

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1. Hock, C. W.: J. Med. Assn. Ga. 40:22, 1951 • 2. Hufford, A. R.: J. Mich. St. Med. Soc. 49:1308, 1950 • 3. Chamberlin, D. T.: Gastroenterology 17:224, 1951 • 4. Pakula, S. F.: To be published •

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NEUROLOGIST SAYS EPILEPTIC IS PILLORIED UNJUSTLY

(Continued from Page 14)

ing free of seizures, although in individual instances the chances might be 10 to 1 or 100 to 1.

"Conditions that minimize the likelihood of an epileptic child are a family history devoid of epilepsy or migraine for the spouse, as well as for the patient, and minimal abnormality of their electroencephalograms; some acquired condition that is at least partially responsible for seizures; late onset of the illness and a normal mental endowment."

He stressed that in viewing the prospective parents, when one is epileptic, the question to be answered is: "Are the transmissible traits of mind, heart and body of such quality that reproduction is justifiable or perhaps advisable?" On the answer depends whether patients should be discouraged or encouraged, he said.

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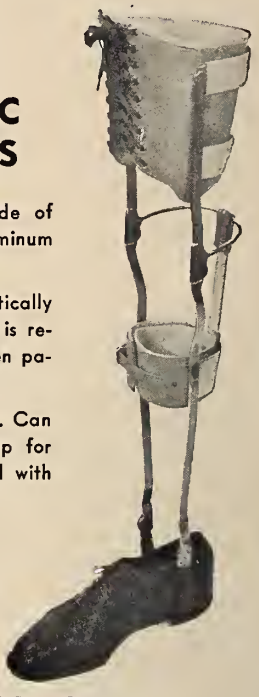

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INFANTS ARE BIG BENEFICIARIES OF ADVANCES IN MEDICAL SCIENCE

Newborn babies and infants under one year of age have been among those to benefit most from advances in medical science and the efforts of public health agencies during the first half of the century, according to Matthew Taback, A.M., director of the bureau of biostatistics, Baltimore City Health Department.

Mr. Taback, writing in a recent issue of the *Journal of the American Medical Association*, said that approximately 20 babies out of every 100 delivered alive in Baltimore in 1900 failed to reach their first birthday. A review of present day records indicates that the mortality rate has decreased at an "unbelievable rate" and now stands at about three infant deaths per 100 live births, a decline of 85 per cent since 1900, he added.

Commenting on the death rate of 50 years ago, he said:

"The loss of human life and wasted pregnancy occasioned by the existence of such a high infant mortality rate are difficult to comprehend. Principal causes of infant deaths in 1900 were diarrhea, pneumonia, acute communicable diseases, prematurity and congenital malformations."

The principal causes of infant deaths today, he said, are prematurity, congenital malformations and birth injury.

He pointed out that in a belief that further savings of human life can be achieved, Baltimore reg-

(Continued on Page 32)

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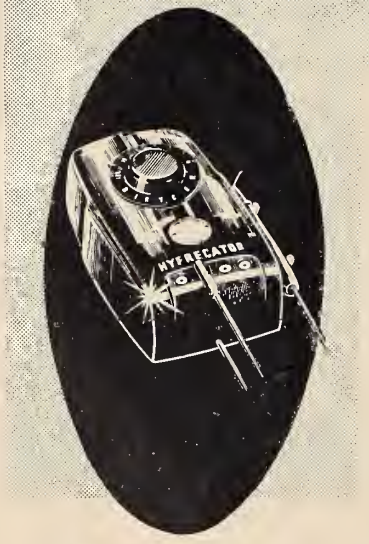

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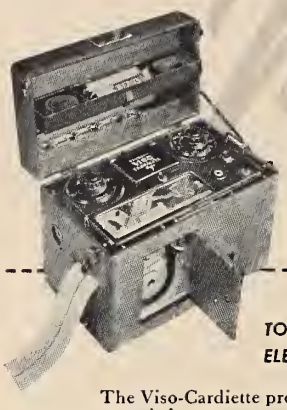

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DOCTORS IN BIG CITIES DO NOT EARN HIGHEST INCOMES

Physicians in the big cities are not earning the highest average incomes.

This was disclosed after an analysis of a physicians' income survey reported by the U. S. Department of Commerce in Washington recently. The survey, in which more than 55,000 physicians participated, is the broadest mail questionnaire survey of professional incomes ever made in the United States. It was a joint undertaking by the Department of Commerce and the American Medical Association.

Commenting editorially on the survey, a recent issue of the *Journal of the American Medical Association* said:

"The study is replete with evidence that the highest average incomes are not being earned by physicians in the large metropolitan cities. This information should buttress the arguments of the many physicians and lay leaders interested in improving medical care in the smaller cities and towns of the rural parts of the country. Although many factors are involved in the choice of location, this study is commended to all interns and residents in hospitals, who are faced with the problem of choosing a location in which to practice."

The survey showed that physicians practicing in cities with a population of over 500,000 did not earn the highest average net incomes; yet it is generally known that they have the highest living costs. The survey presents dollar income only and not real income, which reflects living costs.

The Department of Commerce-American Medical Association study was based on questionnaires mailed to 125,000 physicians. Fifty-five thousand, or roughly two out of five, replied. The Department of Commerce announcement was the first report of the result of the survey of 1949 professional incomes of physicians in the U. S. It covered an analysis of 30,000 replies, which were unsigned and and unidentified.

Work on the survey was done by Frank G. Dickinson, Ph.D., director, and Charles E. Bradley, Ph.D., associate in economics, of the Bureau of Medical Economic Research of the American Medical Association, and William Weinfeld, business economist of the Office of Business Economics of the U. S. Department of Commerce in Washington.

The survey disclosed that the average (mean) 1949 net income from medical practice of the 30,000 physicians, whose returned questionnaires have already been analyzed, was $11,058. Fifteen thousand doctors reported net incomes of less than $8,835—the median net income. Dr. Dickinson said that many statisticians consider the median a more representative value than the mean in income statistics for most occupational groups.

Dr. Dickinson said that probably the most significant information of the survey is that in the 20-year period since 1929, the average net income of all civilian physicians more than doubled, but this relative increase was practically identical with that for all earners in the general population over the same period.

(Continued on Page 32)

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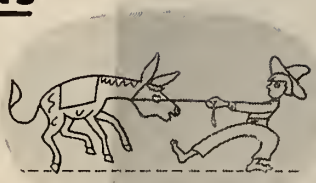

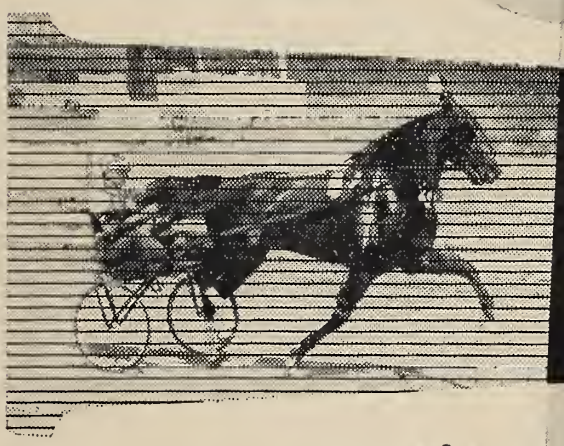

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1. Behrman, H. T., Combes, F. C., Bobroff, A., and Leviticus, R.: Ind. Med. & Surg. 18:512, 1949.

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INFANTS ARE BIG BENEFICIARIES OF ADVANCES IN MEDICAL SCIENCE

(Continued from Page 22)

istration offices are now requesting data that will assist in the study of factors associated with prematurity, congenital malformations and complications of pregnancy. The information in birth records includes length of pregnancy, birth weight, complications of pregnancy and labor, operations for delivery and a description of birth injuries or congenital malformations when present.

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DOCTORS IN BIG CITIES DO NOT EARN HIGHEST INCOMES

(Continued from Page 26)

Drs. Dickinson and Bradley, the A.M.A. *Journal* story said, reached the same conclusion regarding changes since the period 1935-39, a more commonly used base period than 1929 in economic reports.

"They also call attention," the *Journal* article said, "to the fact that all averages refer to net incomes before taxes, and that the gain in net incomes after taxes in recent years was considerably less. The increases in the earnings of physicians during the past 12 or 20 years have been due to three factors: a moderate increase in fee schedules, better collections, and greater 'output per physician.'"

(Continued on Page 33)

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DOCTORS IN BIG CITIES DO NOT EARN HIGHEST INCOMES

(Continued from Page 32)

In a summary of the survey itself, the American Medical Association said that "it appears quite clear that the rise in incomes of physicians and of the American people—their patients—have kept pace with each other during the 1940's. The average physician has been traveling near the center of the inflationary highway, up which the entire American economy has been moving since before World War II."

The survey shows that the average earnings of physicians are above those of lawyers, this being the reverse of the situation which prevailed one or two decades ago. Physicians who are compensated entirely by salary had mean incomes $3,310 lower than those who received no salary; that is, dependent entirely on fees from patients. Roughly, one-fourth of this difference was attributed to the pension rights of salaried physicians and as much as one-fourth to the value of vacation pay and sick leave benefits.

The mean net incomes reported by general practitioners in independent practice was $8,835 as compared with $15,014 for full-time specialists. This excess was not as great, percentagewise, in 1949 as it was in 1929, and the differences in dollars were practically the same.

The A.M.A. analysis of this phase of the study

(Continued on Page 38)

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DOCTORS IN BIG CITIES DO NOT EARN HIGHEST INCOMES

(Continued from Page 33)

pointed out that "the income margin between specialists and general practitioners may or may not have a dollar value sufficient to offset the extra financial sacrifice during three or four years of additional training at nominal salary, or the personal sacrifice at a time in life when most young men are starting or have already started to have a family. Furthermore, the tendency of specialists to locate in the larger cities where family living costs are higher may offset some of the extra earnings of specialists. . . ."

The mean and the median net incomes of the nonsalaried physicians were highest in the Far West (Washington, Oregon, Nevada and California), $14,235 and $12,243. New England ranked lowest in both mean and median incomes, $9,602 and $7,818. The report, including 23 tables and three charts, also presents averages for individual states and selected cities.

The *Journal of the A.M.A.*, commenting editorially, said that "in the larger sense this study demonstrates again that there was no nationwide shortage of physicians in 1949, for physicians' incomes had risen just about as fast percentagewise as the average income of the American people. The mean

(Continued on Page 46)

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DOCTORS IN BIG CITIES DO NOT EARN HIGHEST INCOMES

(Continued from Page 38)

and median net incomes of physicians in 1949 would have been far higher if there had been a nationwide shortage of physicians. On the other hand, this study provides much evidence of the economic advantages of practicing medicine in the small and medium-sized cities and, indirectly, may suggest to some an over-supply of physicians in metropolitan centers."

SUMMARIZE STUDY

Drs. Dickinson and Bradley, commenting on the survey in the *Journal*, said that "it presently seems to us that the important implications of this study are as follows:

"1. The rise in physicians' incomes of the past dozen or 20 years has been at about the same rate as the rise in the national income per capita. More generally, the American people have been fair to their physicians in an inflationary era from the standpoint of income; and vice versa.

"2. Talented high school graduates will continue to choose medicine for the age-old reasons—a great interest in the natural sciences and a conviction that a medical career will provide an opportunity to serve people. The inflationary 1940's have produced only one new financial reason for choosing medicine, namely, that medicine now pays better, on the average, than law—for the incomes of lawyers have not kept pace with the inflationary trends as have physicians' incomes. The trends for certified public accountants and consulting engineers, who reported higher incomes than physicians in earlier surveys, will doubtless be described in future studies.

"3. The highest 1949 average net incomes were not received by physicians in the metropolitan cities where family living costs are high.

"4. The differences between the average incomes of the all-salaried and the non-salaried physicians are considerable, but the value of the perquisites of the all-salaried physicians must be weighed.

"5. The moderate increase in physicians' fees since 1935-1939, as reported by the United States

(Continued in Back Advertising Section, Page 54)

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Specialist-General Practitioner Cooperation in an Obstetrical Department

BLAKE H. WATSON, M.D., *Los Angeles*

SUMMARY

At a private hospital not affiliated with a teaching institution, a system was set up in the obstetrical department under which general practitioners carrying out deliveries had the advice and aid of specialists in obstetrics and were required to call for it in stated circumstances. General practitioners carried out about half of the 17,076 deliveries at the hospital in an eight-year period. Teamwork was stressed. Results were comparable with those reported from many of the well-known institutions.

In addition, a special anesthetic service was organized for the obstetrical department. Anesthesia was administered by young physicians who not only were versed in anesthetic procedures but had special training in obstetrics.

The service was available at any hour, and the physician carrying out delivery could count upon competently administered anesthesia when it was needed, as well as upon consultation and assistance should the need arise.

SINCE the obstetrical department of St. John's Hospital, Los Angeles, admitted its first patient in November 1942, there have been some 17,000 deliveries. About half of the patients were admitted under the care of general practitioners.

Chairman of obstetrical department, St. John's Hospital, Los Angeles.

Presented before the Section on Obstetrics and Gynecology at the 80th Annual Session of the California Medical Association, Los Angeles, May 13 to 16, 1951.

The data in the accompanying tables indicate the various methods of treatment used and the results. The incidence of various abnormalities was quite similar to that reported from many of the well-known institutions of the country. The ultimate end results in terms of maternal mortality, maternal morbidity, stillbirths, and neonatal deaths compare most favorably with results in the better known teaching and private hospitals where practice is entirely confined to physicians qualified under the term "obstetrical specialists."

Under the heading "Supervision" in Paragraph 5 of "The Minimum Standard for Obstetrical Department in Hospitals"—as demanded by the American College of Surgeons—appears the following requirement: "The obstetrical division of the medical staff shall be so organized as to exercise adequate control over the obstetrical work done in the hospital, such organization to include a chief or head of the department or service who shall be responsible for the general supervision of the professional activities of the department."

In order to exercise adequate control, the quality of work done by each physician engaged in the practice of obstetrics in the department must be known. Therefore, at St. John's Hospital all were classified into two major groups. This classification was arrived at after careful examination of creden-

TABLE 1.—*Presentation and Positions in 17,076 Deliveries*

Vertex		
a. Occiput anterior	14,820	(85%)
b. Occiput posterior	1,410	(8%)
Breech	636	(3.7%)
Brow	16	
Face	30	
Transverse	18	

TABLE 2.—*Method of Delivery*

Total	17,076
Spontaneous	10,264
Low-forceps	4,576
Mid-forceps	97
High-forceps	4
Manual rotation with forceps (mid and low)	530
Forceps rotation with extraction	213
Craniotomy	2
Podalic version and extraction	37
Cesarean section	891
Breech	636

TABLE 3.—*Data on Breech Deliveries (524 Consecutive Cases, Jan. 1, 1943, to Dec. 31, 1949)*

Total number deliveries	14,229	
Total number breech deliveries	524 or	3.68%
Type of Delivery	No.	Per Cent
Decomposition of breech and extraction	32	6.1
Spontaneous with breech assistance	440	83.9
Cesarean section	52	10.0
Forceps to after-coming head	35	6.6
Maternal morbidity	17	3.2
Fetal mortality (uncorrected)	80	15.2
Fetal mortality (corrected)	7	1.3
Maternal mortality	None	

tials bearing details of training, practical experience and qualification by major obstetrical boards. This was followed by personal observation of the individual's handling of normal and abnormal procedures in the department itself and his ability as demonstrated during this period of probation.

Group A consisted of physicians permitted to carry out all types of obstetrical procedures, consultation being required only in cases of cesarean section. This group included all qualified obstetricians.

Group B consisted of physicians permitted to practice obstetrics in the department but restricted to cases in which the delivery was normal and uncomplicated. Should complications arise, one of the consulting staff must be called in to aid in the conduct of the case wherever possible or, if necessary, take over until safe delivery is accomplished.

The physicians in Group B are required to call for consultation:

1. Prior to any obstetrical operation, with the exception of episiotomy or prophylactic use of low forceps.

2. For induction of labor by the use of pituitary extract or rupture of the membranes.

3. In any case in which the patient has been over 12 hours in active labor or in which the membranes have been ruptured for 12 hours.

4. In all cases of toxemia.

5. In any case in which the patient is admitted with evidence of bleeding, before, during or after parturition.

6. In any case of abnormal presentation, including primiparous breech.

7. Prior to cesarean sections.

8. In any case of postpartum complication such as pyrexia, thrombophlebitis, etc.

This consultation service was provided by a group, designated as obstetrical consultants, appointed by the obstetrical committee. The consultants gave their service free of charge to the patient as a service for better obstetrics, except in instances in which the attending physician advised that a fee should be charged.

In approximately 95 per cent of cases, consultation was gratis.

Consultants have been encouraged to attempt close relationship with the general practitioners in this supervisory and consultant capacity. The aim has been to impart a general feeling of working as a team for the good of the patient and to avoid any implication that the consultant is trying to steal the glory and the patient from the practitioner who admitted the patient to the department. Following cesarean section, the general practitioner is encouraged to carry out the daily postpartum care, although the operating surgeon must also continue observation and daily visits. Standard techniques for labor and delivery room, to be followed by all physicians and the nursing staff, were set up and posted.

Luncheons which all physicians doing obstetrics are urged to attend are held monthly. A detailed obstetrical report is available to each physician attending. The report contains data on the following: Presentation and position; lacerations; anesthesia (type used); toxemia; prolonged labor; type of de-

TABLE 4.—*Cesarean Sections*

	Total	Repeat	Incidence (Per Cent)
1943	57	7	3.3
1944	81	12	4.5
1945	89	13	5.1
1946	115	16	6.0
1947	133	37	5.6
1948	120	24	5.3
1949	133	41	5.8
1950	132	38	5.4
	860	188	4.8

Deaths, 2 (2.3 per cent)

TABLE 5.—*Data on Stillbirths*

	Total	Under 30 Weeks	Under 36 Weeks	Full Term
1943	23	10	4	9
1944	21	10	5	6
1945	24	8	3	14
1946	30	12	5	13
1947	26	13	2	11
1948	26	10	5	11
1949	27	9	6	12
1950	29	12	8	9
	206 (1.2%)	84 (0.5%)	38 (0.2%)	85 (0.52%)

Table 6.—*Neonatal Deaths*

	Total	Under 30 Weeks	Under 36 Weeks	Full Term
1943	22	9	5	8
1944	24	6	9	9
1945	25	8	12	3
1946	37	23	5	9
1947	31	21	1	9
1948	31	19	5	7
1949	34	16	4	6
1950	24	10	6	8
	228 (1.28%)	112 (0.7%)	47 (0.3%)	59 (0.4%)

Table 7.—*Maternal Mortality*

1943	0	
1944	0	
1945	3	
1946	0	
1947	1	
1948	1	
1949	2	
1950	0	
	7	(0.04%)

livery; episiotomy; spinal anesthesia; hemorrhages; tumors associated with pregnancy. A summary of all cesarean sections, stillbirths, neonatal deaths and maternal deaths is carefully prepared by the resident. Free discussion is encouraged and criticism is welcomed. Reports on interesting cases taken only from the department are presented and discussed. Specialists in other fields, such as internists and radiologists, are invited to correlate factors relating to their specialties with the case in question.

OBSTETRICAL ANESTHESIA

During the first three years of this program, obstetrical anesthesia was administered by the Sisters and by nurses. Not all of them were well trained in the art of anesthesia. With the introduction of spinal block, it was imperative that trained anesthesiologists be introduced into the department. (The author is of the opinion that spinal anesthesia should not be administered by the attending physician, because as he must leave the head of the table to carry out the delivery, he cannot constantly observe the patient for changes in blood pressure and respiratory rate, vomiting, etc. This opens the door to accidents which are avoidable if careful observation is maintained.) The department of anesthesia was approached, but for many reasons a working regime could not be guaranteed at all times. For this reason, a branch of obstetrical anesthesia was formed in the obstetrical department. Four young qualified obstetricians, all of whom had given obstetrical anesthetics in many cases, were chosen. One of them had administered caudal anesthesia in over a thousand cases. (Caudal anesthesia is not encouraged in the department of anesthesia in this hospital.) All of them had an intense interest in obstetrics and none of them was so well established in private practice that he could not devote a good deal of time to the assignment. With this nucleus, all anesthesia given in the obstetrical department was administered by trained men. It was required that one of these men be on duty in the hospital at all times. The four physicians with whom the service was begun have in turn trained other young qualified physicians. It is hoped that by following this course the system can be continued until something more satisfactory can be achieved. These physicians who administer the anesthesia are paid for their services on an individual fee basis, for which the patient is responsible.

The system outlined has an important place in the obstetrician-general practitioner team. Not only does it provide well administered anesthesia, but in times of emergency there is at hand a well trained, qualified obstetrician who can give help when it is needed, advice when it is desired, and if necessary can take over the delivery. In many cases in which complications such as prolapse of the cord or terminal abruptio placentae occurred, the presence of an experienced obstetrician has been of great benefit. Moreover, it is reassuring to know that, in case of hemorrhage or shock, a physician experienced in the proper therapy in the form of plasma, blood, oxygen, etc., is standing by. The aid of physicians with knowledge of resuscitation of the newborn and of endotracheal catheterization has prevented infant deaths on many occasions. The constant presence of an experienced obstetrician in the confines of the obstetrical department is also a comfort to members of the attending nursing, resident and intern staff who may seek his counsel in event of complications.

It is the duty of physicians, whether obstetricians

Table 8.—*Causes of Maternal Death*

1. Toxemia of pregnancy (acute yellow atrophy).
2. Toxemia of pregnancy (eclampsia with cerebral accident).
3. Cardiac disease in pregnancy (acute right-sided heart failure).
4. Postpartum air embolism (spontaneous delivery).
5. Toxemia of pregnancy (eclampsia—generalized arteriosclerosis).
6. Cardiac death intrapartum (coronary spasm due to ergotrate given intravenously).
7. Prepartum cerebral vascular accident (thrombosis sagittal sinus). Postmortem cesarean section successful.

Table 9.—*Obstetrical Anesthesia*

Year	Total Deliveries	Anesthesia Employed — Inhalation No.	Pct.	Spinal No.	Pct.	Miscellaneous
1943	1,722	1,711	(99.36)	9	(00.36)	2 pentothal, 5 none
1944	1,781	1,769	(99.32)	3	(00.34)	3 none
1945	1,710	1,689	(98.77)	19	(1.2)	2 caudal
1946	1,911	1,504	(78.70)	402	(21.03)	2 caudal, 3 none
1947	2,336	1,079	(46.19)	1,249	(53.47)	8 none
1948	2,252	1,070	(47.51)	1,168	(51.86)	14 none
1949	2,300	1,154	(50.20)	1,123	(48.80)	1 local, 22 none
1950 (Through June)	1,138	574	(50.50)	555	(48.70)	1 local, 8 none

or general practitioners, who care for parturient women, to do their utmost to deliver a healthy infant without damage to the child or to the mother. It is consistent with this duty to seek and to give help and advice and to pool knowledge in a common effort to perform good safe obstetrics. In doing so lies hope for nearly perfect results.

10962 Le Conte Avenue.

Discussion by ROBERT H. FAGAN, M.D., *Beverly Hills*

With regard to Dr. Watson's paper, there are three points that I feel could bear even further emphasis: First, the fact that the statistics are from a non-teaching hospital. Second, the fact that 50 per cent of the cases were managed by general practitioners. Last, Dr. Watson's system of providing obstetric anesthetists—a system which I, as an attending obstetrician, have found gratifying and practical.

Formerly, statistics such as these occurred only in teaching hospitals where the standards of medical care have been traditionally high. In recent years, reports from private hospitals all over the country show similarly remarkable records. This is an admirable transition, for obviously not every hospital can be associated with a medical school and, when records such as these occur, we may feel assured that better medical care is becoming more universal and is not necessarily limited to the so-called "fountains of learning." As a matter of fact, because teaching hospitals must necessarily be ultra-conservative, many advances in obstetric procedures now arise in the private institutions. However, in the comparison of mortality statistics, one must remember, in fairness to all, that many teaching and general hospitals have large indigent clienteles, where malnutrition, poverty and lack of cooperation of patients augment obstetrical disasters.

The fact that 50 per cent of the deliveries in St. John's Hospital were managed by general practitioners is interesting and tends to support the general trend in medical education that there is a need for general practitioners, even in large metropolitan areas. The over-all obstetrical care in a community may be improved by making arrangements for general practitioners to work in cooperation with the obstetrical specialists in hospitals where consultation and help in emergencies is readily at hand. In hospitals lacking this supervision, results are not so favorable.

Probably there has been no factor in obstetrics so unsatisfactory as being unable to procure hurriedly at all times a good obstetric anesthetist. I believe it is understandable that certified anesthetists should choose not to give obstetric anesthesia because of the long and uncertain hours. The procedure at St. John's as outlined by Dr. Watson is one of the most gratifying arrangements that I have experienced in over 20 years of obstetric practice. The realization that there is constantly available a physician well trained in obstetrics, as well as in obstetric anesthesia, affords to all concerned great security in emergencies.

These obstetrician-anesthetists must be qualified in various techniques of obstetric anesthesia and this ability may be and should be acquired, in my opinion, by all obstetricians during their hospital training. In addition to the obvious advantages to the patients, the nurses and the attending physicians, the benefits to these young men are very great. They profit greatly by observing the conduct of labor of their older confreres. One of the unfortunate aspects of obstetric practice is that often after a physician leaves his formal training he never again observes a colleague conduct a delivery. It is amazing how many variations in procedures are improvements over the techniques one has originally acquired, and it is by the observation of a large number of competent obstetricians at work that younger men may ultimately perfect the techniques of delivery best adapted to their own capabilities. Moreover, the first few years of obstetric practice are necessarily lean ones financially, for in contradistinction to other branches of medicine, the young obstetrician has no available insurance work or industrial contracts which help a young physician pay his overhead. The fees that may be charged for obstetric anesthesia, therefore, are most welcome. The patients, the delivery room personnel, the attending physicians and the younger physicians all profit. As far as I can see, there are no objections to this arrangement. I heartily commend it as the most satisfactory method of handling this major obstetrical problem that I have personally observed. I believe Dr. Watson and the personnel of St. John's Hospital are to be congratulated for the excellent record they have established.

The Treatment of Metastatic Breast Cancer in Bone

Merrell A. Sisson, M.D., and L. H. Garland, M.D., *San Francisco*

SUMMARY

The authors report clinical experience with 212 cases of mammary cancer metastatic to bone, in 186 of which radiotherapy was given, and in 26 steroid hormone therapy.

At least 70 per cent of patients with bone metastasis from breast cancer were relieved of pain by adequate roentgen therapy, the relief lasting for most of the survival time in many instances.

About 25 per cent of patients had recalcification or reossification of bony lesions with roentgen therapy; while dramatic, this is not always an indication that relief of pain will continue or that survival time will be lengthened.

If and when adequate radiotherapy has not been effective or cannot be administered (for example, in a patient with extremely widespread metastasis, or one residing at a considerable distance from radiotherapeutic service) steroid hormone therapy in adequate dosage is frequently beneficial. From 40 per cent to 75 per cent of patients with bone metastases from breast cancer are relieved of pain by steroid hormone therapy. In about 15 per cent of cases recalcification of the lesion occurs.

Effective roentgen therapy may usually be given in a relatively brief period of time (one to two weeks). Effective steroid hormone therapy usually requires from 12 to 24 weeks.

Complications of steroid hormone therapy are numerous. Some patients are made considerably worse by such therapy. These complications may only be controlled by reduction or discontinuation of the hormones. For this reason, it is recommended that irradiation always be used as the initial method of palliation.

IN an extensive review of the present status of cancer chemotherapy published some months ago, Karnofsky and Burchenal[15] made this pertinent observation: "The tremendous interest in the chemotherapy of cancer is out of proportion to the practical contributions that chemotherapy thus far has made to the management of the disease." Although this "tremendous interest" is of great importance, it has tended to obscure the fact that for one type of cancer, namely, mammary cancer metastatic to bone, there is a simple and effective method of therapy available in most communities in this country. In order to review the experience of the authors in this field, and to present comparative results in a series of cases treated respectively by radiotherapy and steroid hormone therapy, this paper is being presented.

Breast cancer is the commonest form of malignant tumor in females: the incidence is about 60 per 100,000 women, per annum, in one sector of this country. Since many of its victims live for long periods of time, the prevalence of the disease is probably five-fold the incidence figure. Haagensen[13] estimated that the disease develops in 4 per cent of adult women.

From the Departments of Radiology, Stanford University Hospital, San Francisco Hospitals, and St. Joseph's Hospital, San Francisco.

Presented before the Section on Radiology at the 80th Annual Session of the California Medical Association, Los Angeles, May 13 to 16, 1951.

The incidence of bone metastasis varies with the duration of the disease, the success of initial treatment of the primary lesion, and the method of examination used in the detection of metastases. Bone metastasis has been reported in about 75 per cent of cases at autopsy by different observers.[1,9] In a series of 886 cases of breast cancer, mostly recurrent or inoperable, recently studied by the Collaborating Investigators on the Subcommittee on Steroids of the American Medical Association Committee on Research,[8] there were demonstrable bone lesions in slightly over 55 per cent. In a study of 767 cases of "operable" breast cancer (all patients subjected to radical mastectomy) Nohrman[19] found that even in this relatively favorable group bone metastases developed within ten years in 28 per cent of the patients (see Table 1). In the authors' clinical experience, bone lesions developed in at least 50 per cent of patients not initially cured of breast tumor.

On the basis of an extensive review of cases at the Mayo Clinic, Burch[5] concluded that the greater

Table 1.—*Incidence of Skeletal Metastases After Radical Mastectomy (767 Patients)* (Nohrman)

Clinical Stage of Primary Tumor	Bone Metastasis Occurrence Within 5 Years	10 Years
Stage I	10%	15%
Stage II	27%	37.3%

the degree of axillary node involvement, or the younger the patient, the earlier was the occurrence of metastasis.

About 95 per cent of metastatic bone lesions produce pain at some time during their course. Pathologic fractures develop in many such lesions, notably in the ribs, vertebral bodies and other weight-bearing bones. Severe anemia develops in some cases, and hypercalcemia in a few, especially in those patients with generalized skeletal involvement who are confined to bed.

The metastatic lesions are osteolytic in about 75 per cent of cases, osteoblastic in about 10 per cent, and of mixed type in the remaining 15 per cent. When the cortex of a bone is involved, an osteolytic lesion larger than 5 mm. can usually be detected by proper roentgenologic examination. However, when the medulla alone is involved, there may be extensive deposits that are not observable in roentgenograms. For this reason, it is wise to treat patients with clinical evidence of metastatic bone lesions even though the presence of the lesion cannot be confirmed roentgenographically.

DIAGNOSTIC PROCEDURES

In addition to the usual history and physical examination, plus roentgenograms of the area in which patient complains of pain, it is desirable in many cases to have a simple or basic skeletal survey, plus a few laboratory determinations, especially if steroid therapy is contemplated. A basic "x-ray survey" is regarded as:

1. Skull (posterior-anterior and lateral films).
2. Chest (posterior-anterior and lateral films).
3. Lumbosacral spine and pelvis (anterior-posterior and lateral films).

Stereoscopic studies tend to enhance the value of the above projections, especially in cases of questionable or small lesions.

Basic clinical laboratory determinations include blood cell count and hemoglobin and serum calcium determinations. The importance of the latter cannot be overstressed in the event that steroid hormone therapy is undertaken, since serious hypercalcemia may be present or develop during such therapy, especially in patients confined to bed. Too frequently in such circumstances the symptoms are attributed to bowel obstruction, brain metastases or uremia. Swyer and co-workers[24] recently reported hypercalcemia in 14 per cent of a group of patients observed, all apparently prior to treatment. The main triad of changes in this hypercalcemic syndrome are (1) gastrointestinal disturbances (anorexia, nausea and vomiting); (2) mental changes (incoherence, speech difficulty, apathy and even coma); and (3) renal impairment (gradually decreasing urinary output, with increase in the blood urea nitrogen).

TREATMENT

The treatment of metastatic cancer in bone is essentially palliative, and directed toward the relief of pain or the healing of fractures. It may be in the form of radiotherapy, steroid hormone therapy, and, perhaps, alternation or combination of the two methods. In most cases, with judicious treatment, life is made more comfortable and in some it is prolonged. It is essential that simple measures precede or be combined with specific treatment, notably measures to improve the general nutritional status of the patient, especially as regards adequate protein and vitamin intake.

Radiotherapy may be given by external roentgen therapy, external radium therapy or internal irradiation (radioactive isotopes). The simplest, most effective and most easily controlled method is external roentgen therapy. A majority of patients treated by the authors were given 200-kilovolt irradiation, using a half-value-layer of approximately 1.0 mm. copper a target-skin distance of from 50 to 80 cm., and fields large enough for the lesion or lesions under treatment. Since microscopic involvement of bone often exists alongside macroscopic, and since the relative depth dose of 200-kilovolt irradiation is much greater when large areas are irradiated, the fields commonly used ranged from 15 cm. up to 30 cm. in diameter. The initial course usually consisted of a series of treatments given over a period of one to two weeks, to deliver a tumor dose of from 500 to 1,000 r. The daily doses ranged from 100 to 200 r, measured in air, usually to one field. In about 80 per cent of cases there was significant relief of pain during or within a few weeks of the end of this course. If relief of pain was inadequate or of short duration, a second course was given, equal in amount to the initial one. When and if pain recurred in the same or other sites, additional such courses were given, over a period of years if necessary.

Radium therapy has been used by a few workers, chiefly in the form of teleradium, but is not generally regarded as a practical method of therapy. Gamma-ray cannons using radioactive cobalt slugs fall in the same category, at least at present.

Internal irradiation by means of radioactive phosphorus was used in a small group of cases reported by Friedell and co-workers.[10] The duration of life after treatment in the 12 patients given radioactive phosphorus averaged 5.4 months. Pain relief of moderate degree occurred in most of them, but was vitiated by complications secondary to damage of the hematopoietic system; severe hemorrhagic tendencies occurred nine times in 14 courses of treatment.

Hormonal therapy is designed to alter the environment of hormonally dependent cells, rather than directly destroy or suppress the cells (as radiation attempts to do). Hormonal imbalance may be obtained by surgical or radiological castration, by autocastration (in the case of those patients with metastasis to the ovaries), and by the administration of suitable steroid hormones.

Surgical or radiological castration (without added

local treatment to the extra-pelvic osseous metastases) will sometimes induce a striking remission of generalized bone lesions. Unfortunately, this striking effect occurs in only about 20 per cent of cases, and cannot be predicted in advance. Furthermore, the method is, of course, applicable only to premenopausal patients.

Creation of hormonal alterations by administration of androgens to women in the younger age group (mostly under 55) and estrogens to those over that age is frequently successful in the relief of pain and occasionally in the recalcification of osteolytic bone lesions. If patients do not respond to one type of hormone (e.g., estrogens) it may be possible to obtain remission with the opposite type. Such reversal of hormone balance may be successful on more than one occasion in a few cases. However, not many patients survive long enough for thorough use of alternating hormone therapy.[6]

Cortical steroids have been tried in a few cases of metastatic mammary carcinoma. Taylor and co-workers[25] reported five cases in which patients with advanced breast cancer were treated with pituitary adrenocorticotropic hormone and cortisone. A carcinomatous ulcer healed in one case, a skin nodule decreased in size in another. The behavior of such bony metastases as were present was not specifically commented upon.

RESULTS OF ROENTGEN THERAPY

In collaboration with Picard and Baker, the authors recently reviewed in some detail the results of x-ray treatment in 79 cases of mammary cancer metastatic to bone, all followed to death.[12] These results may be summarized as follows: 68 per cent of the patients obtained satisfactory or complete pain relief; 32 per cent obtained little or no benefit. Slightly over one-half of the patients had relief of pain for most or all of their survival time. The average survival time for the group as a whole was 12 months from the development of roentgen evidence of bone metastasis. These results are contrasted with those of other investigators in Table 2.

In approximately one-half of the 79 cases reviewed, adequate serial roentgenograms were available for study. In 26 per cent of these cases, recalcification or reossification of the metastatic bone lesions was apparent (that is, previously osteolytic foci filled in or previously osteoblastic foci restored to normal architecture). In somewhat over one-third of the cases there was no change in the appearance of the metastases during a time interval of some three to 12 months; this apparent arrest in progression was noteworthy in some cases. In the remaining patients, that is, about one-third of the group, there was steady progression of the metastatic bone disease. These results in recalcifying the lesion may be compared with those reported by others in Table 3.

TABLE 2.—*Results of Roentgen Therapy of Bone Metastases from Cancer of the Breast*

Author	No. of Cases	Per Cent Pain Relief	Average Survival Period (After Discovery of Bone Metastasis)
Wulff	44	46	14.3 months
Bouchard	23	65	13.6 "
Pohle and Benson	18	65	..... "
Burch	41	70.6	15.5 "
Lenz and Freid	31	71	11 "
Deucher	145	78	13 "
Leddy, et al.	106	80	..... "
Garland, et al.	79	68.4	12. "

TABLE 3.—*Recalcification of Bone Metastases Following Roentgen Therapy*

Author	Cases	Per Cent
Wulff	44	22.7
Bouchard	23	26
Lenz and Freid	27	37
Garland et al.	38	26.3

In addition to the previously mentioned group of 79 patients, the authors treated 107 patients with bone metastasis from breast cancer in private practice, both office and hospital. Some of these patients are still under treatment, some have died after varying periods of relief, and some are untraced. Clinical records indicate that the percentage of patients with relief of pain was somewhat higher than in the first reported group, but in the absence of complete follow-up data, the average duration of this favorable response cannot be stated. The number of cases in which adequate serial roentgenograms were available was not large enough to warrant analysis with regard to the proportion of patients who had objective improvement. Many patients with relief of symptoms do not return for follow-up films.

RESULTS OF STEROID HORMONE THERAPY

The author studied a small group of 20 cases in which the patients were treated with steroid hormones in accordance with the program of the Committee on Research of the American Medical Association.[12] About 40 per cent of the patients given androgen treatment had relief of pain, but none recalcification. About 33 per cent of estrogen-treated patients obtained relief, and one of six had recalcification. In a large group of cases studied by the Collaborating Investigators, the incidence of relief of pain in the androgen-treated group was considerably higher than it was in the author's corresponding group, but in the estrogen-treated group was quite similar. The mean survival time in the larger group of steroid hormone-treated patients was 8.8 months, as contrasted with the authors' experience of 12 months with roentgen therapy.

Results of Garland and co-workers with the use of steroid hormones are compared with those of other groups in Table 4.

Subsequent analyses have shown that the objective bone response in patients over 50 years of age was considerably better than that in the group under 50. This applied to both androgenic and estrogenic therapy.

In addition to the initial group of 20 patients

TABLE 4.—*Effect of Steroid Hormone Therapy (Androgenic) on Bone Metastases from Cancer of the Breast (Garland et al.)*[12]

Author	Cases	Subjective Relief (Per Cent)	Objective Change (Recalcification by X-Ray) (Per Cent)
Van Winkle, 1949	77	45	13
Andersen, 1949	21	58	19
Adair et al., 1949	48	75	19
Nathanson, 1949	65	83	24
Garland et al., 1950	9	40	0
Van Winkle (Committee on Research), 1950	218	75	16

given steroid hormone therapy (previously reported[12]) six others have been treated. The results were essentially the same as in the earlier group. A few were given a trial of associated roentgen therapy; on these no conclusions are yet warranted.

COMMENTS ON DOSAGE AND SIDE REACTIONS

Roentgen therapy. The optimum radiotherapeutic dose for skeletal metastases has been a subject of considerable discussion ever since Freund[11] first reported the results of such treatment in 1907. Many radiologists prefer small to moderate doses (for example, 600 to 1,000 r estimated in the tumor in six to 12 days) while others advise heavy irradiation (3,000 to 5,000 r in the tumor in 15 to 30 days). It has been the authors' experience, based on some 214 cases, that the vast majority of patients get relief of pain and that in some cases there is roentgenographic evidence of recalcification after small doses—for example, 600 r into the metastatic tumor area. If relief should not be obtained within a few weeks of the initial course, additional dosage should be given. These small courses may be repeated safely up to four or five times during the lifetime of the average patient with metastatic mammary carcinoma in the event that the lesions recur or new lesions develop in adjacent areas.

Wulff,[28] Peck, Ransom and Hodges,[21] Burch,[5] Leddy and Desjardins,[16] Pohle and Benson[22] and others[17] also recommended moderate dosage, Wulff observing that "large and intensive series of treatments seem if anything to do more harm than good."

On the other hand, Paterson[20] advised as much as 1,000 to 1,500 r in one *day*, or "2,500 r tumor in eight days," for localized deposits. Freid and Goldberg[9] advised a dose "up to 3,000 r per field over several fields." Bouchard[4] gave from "2,000 to 4,000 r air."

It seems probable, in retrospect, that some of the authors' own failures in obtaining relief of pain were due to not following up the initial course of irradiation with a second one after an interval of three or four weeks. Supplemental protein administration was rarely attempted; in the light of recent concepts of bone regeneration it should prove helpful in some cases.[23]

Complications and side effects. The immediate complications of properly given roentgen therapy (for bony metastases) are either nil or consist of mild nausea. In the doses the authors employ, skin erythema or increased bone pain does not occur. Temporary epilation follows treatment of cranial metastases. In premenopausal women, pelvic irradiation is naturally and fortunately followed by amenorrhea. Any symptoms from this "artificial menopause" tend to be in direct ratio to the advance impressions given to the patient; they are negligible in psychologically prepared or mentally stable patients. If roentgen dosage to an abdominal field is unduly heavy, the complications of course include severe nausea, vomiting, erythema, accentuation of pain and so forth.

Steroid hormone therapy. The optimum dosage of androgenic substances is being studied by the investigators of the Subcommittee on Steroids and Cancer. Their work to date suggests that a dosage of 150 mg. of testosterone propionate per week for 12 or more weeks may be optimal. However, the evidence to date does not prove that any one dosage schedule (e.g., 75, 150, 300 or 600 mg. per week) is definitely superior. Before concluding that a patient will not respond to testosterone a total dose of at least 3 gm. and a duration period of at least three months is desirable. This "full course" of treatment is advisable even if symptoms respond in a shorter period. The principal field of usefulness of androgens appears to be in premenopausal women; bone metastases in postmenopausal women appear to respond equally well to either hormone.

The optimum daily dosage of estrogenic substance is not known. The Subcommittee's investigators on estrogens have included a study of several preparations, each at a certain daily dosage, with the use of diethylstilbestrol as a "standard" for comparison. The minimal effective total dose of diethylstilbestrol, Premarin,® Dienestrol® and DMS (dimethyl ether of diethylstilbestrol) is about 4 gm., and the minimal length of treatment about six months. The minimal total dose of ethinylestradiol and estradiol dipropionate is 200 to 500 mg. and the minimum length of treatment also about six months.

Investigations of other compounds, such as TACE (tri-para-anisyl chloroethylene) methylandrostenediol and methyl testosterone, are being made. Methyl androstenediol is an androgen with less virilizing property than testosterone; Homburger and co-workers[14] reported apparently favorable results with its use in seven cases, but further study is needed.

Complications and side effects. The complications of adequate steroid hormone therapy are relatively common and occasionally fatal. They include hirsutism, edema, uterine bleeding, nausea, vomiting, hypercalcemia and urinary incontinence (see Table 5). Some patients, especially those treated with estrogens, should have curettage to rule out a coexisting or previously silent uterine carcinoma.

Complications are sufficiently frequent to render it advisable almost always to use radiotherapy

rather than hormone therapy as the initial method for palliation.

COMPARATIVE EFFECTIVENESS OF ROENTGEN AND STEROID HORMONE THERAPY

In the authors' experience, roentgen therapy for patients with mammary cancer metastatic to bone resulted in subjective improvement in about 70 per cent of cases and in objective improvement in about 26 per cent. With steroid hormone therapy there was subjective improvement in approximately 40 per cent of cases, and objective improvement was negligible. However, the experience of other investigators with steroid hormone therapy has shown results very comparable to those obtained by the authors with roentgen therapy (see Table 6).

This table does not reflect another comparative advantage of roentgen therapy, namely, apparent longer "arrest" (although not recalcification) of metastatic lesions. In the irradiated cases about 35 per cent of patients had no pronounced progression for a period of three to nine months following treatment, while such apparent arrest occurred in only about 15 per cent of hormone-treated patients.

The mean survival time of all patients receiving roentgen therapy for bone metastasis was 12 months, and of all patients receiving steroid hormone therapy for bone metastasis, 8.8 months. The slight difference in these two figures may be due entirely to the nature of the material in the two groups of cases. Clinically troublesome side effects are more common with hormone therapy than with irradiation, and actual worsening or acceleration of lesions occurs in a small percentage of hormone-treated patients, but in no roentgen-treated patients in the authors' experience.

Numerous investigations are being pursued in an effort to improve the efficiency of hormone therapy, and to study the effectiveness of combining roentgen and hormone therapy. No conclusive results have as yet been published. It has been suggested that ACTH (adrenocorticotropic hormone) or cortisone may be used as a temporary palliative agent in very severe advanced cases, previously not treated by roentgen or hormone therapy, to be followed in due time by one or other of those weapons.

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Table 5.—*Incidence of Side Effects of Steroid Hormone Therapy*

	With Androgens (Per Cent)	With Estrogens (Per Cent)
Hirsutism	65	....
Edema	29	33
Bleeding	3	26
Nausea	8	33
Vomiting	6	19
Hypercalcemia	8	3
Urinary incontinence	....	10

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Table 6.—*Comparative Effects of Roentgen and Steroid Hormone Therapy in Breast Cancer Metastatic to Bone (Garland et al.)*[12]

Treatment	Cases	Subjective Improvement (Pain Relief) (Per Cent)	Objective Improvement (Recalcification) (Per Cent)	Clinically Troublesome Side Effects (Per Cent)	Lesions Apparently Made Worse (Per Cent)
Irradiation	79*	68	26	5	0
Androgen	218†	75	16	25	0.7
Estrogen	77†	38	18	15	2.5

* Authors' material.
† Material of the Subcommittee.

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Diagnosis of the Hemolytic Anemias

Edward R. Evans, M.D., *Pasadena*

SUMMARY

Classification of the varieties of hemolytic anemia is based upon whether hemolysis is due to inherent defects within the erythrocyte or to extracellular factors.

Confirmation of diagnosis in cases in which the disease is clinically suspected is made upon the basis of the following laboratory data: Hyperbilirubinemia giving an indirect van den Bergh reaction, observation of typical factors in a smear of the blood, a reactive bone marrow, increased urobilinogen in stools and urine, and absence of bilirubinuria.

Differentiation of the different types depends upon determination of altered fragility of erythrocytes as indicated by tests of resistance to heat, acid, and mechanical and osmotic stimuli, and upon the identification of an antibody.

The importance of detecting antibodies demonstrable in acid serum is mentioned.

In a majority of cases, acquired hemolytic anemia is caused by antibodies, malignant disease, or toxic agents.

HEMOLYTIC anemia results from an increase above normal in erythrocyte destruction and beyond the compensatory ability of the bone marrow to match.

The average life-span of the normal erythrocyte is about 120 days. This has been conclusively established both in this country and abroad by transfusion experiments involving the introduction into normal persons of normal erythrocytes either tagged with P_{32} or of a different blood group than the blood of the recipient. These transfused erythrocytes may be identified by the Geiger counter or by differential agglutination. There is normal daily destruction and production of 7 to 8 gm. of hemoglobin and about 1 per cent of the circulating erythrocytes. Small increases in erythrocyte destruction may be equalized by increased marrow erythropoiesis, but when destruction outstrips production, anemia results.

The recognition of hemolytic anemia is important because anemia of this order does not respond to iron compounds, liver extract, folic acid, B_{12}, other vitamins, or other hematinics which may be given before the type of anemia is recognized. An accurate diagnosis should always be attempted in order to prognosticate the course of the illness, to avoid useless medication, and also for the very pragmatic therapeutic reason that in a few of the various kinds of hemolytic anemia dramatic results may be achieved by splenectomy or vigorous treatment of the underlying cause. Increased hemolysis may be caused by such diverse mechanisms as splenic destruction of spherocytes, perverse antibody production, leukemia and lymphoma, animal toxins, and chemical idiosyncrasy, to mention a few. Before classifying the hemolytic anemias, the recognition of abnormal hemolysis itself is necessary.

The purpose of this presentation is to state general principles and outline procedures which may be done in the average clinical laboratory. Complete techniques are given in detail by Ham[12, 13] in two recent publications.

In a carefully taken history and physical examination, anemia, icterus, splenomegaly, hepatomegaly, lymphadenopathy, leg ulcers, Raynaud-like phenomena, familial or past history of jaundice, contact with chemicals, or disease not infrequently associated with increased hemolysis will be noted. Clinical laboratory data are usually necessary to confirm the clinical impression and to differentiate between the different groups of hemolytic anemia.

RECOGNITION OF INCREASED HEMOLYSIS

Pigment reactions. Hemoglobin is broken down by the cells of the reticuloendothelial system to the pigment bilirubinglobin. This pigment does not pass the renal barrier, so it does not appear in the urine. It gives the indirect or delayed van den Bergh reaction. The parenchymal cells of the liver split off the globin molecule and excrete the resulting bilirubinate as the sodium salt into the bile, by which medium it reaches the intestines. The bacterial flora of the bowel reduce the bilirubin to the colorless chromogen urobilinogen, part of which is excreted in the feces, the rest being absorbed into the portal circulation. The greater portion is reexcreted in the bile or metabolized by the liver; small amounts are excreted in the urine. An increase in hemoglobin catabolism, therefore, results in an increase in serum bilirubinglobin, fecal bilirubin, and fecal and urinary urobilinogen.[22, 23]

The relative levels of serum bilirubinglobin and fecal urobilinogen are dependent upon the functional capacity of the liver. For example, in moderate hemolytic anemia with good liver function, there may be little or no increase in the icteric index or serum bilirubin, yet the fecal and urinary urobilinogen may be increased to several times normal. On the other hand, a person with a milder hemolytic

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anemia but with impaired liver function may have elevated serum bilirubin. The serum bilirubin alone is therefore not a reliable index of the degree of hemolysis.

Obstructive or hepatocellular jaundice produces increased serum bilirubin, which, unlike bilirubinglobin, appears in the urine and gives a positive direct or immediate van den Bergh reaction. Both bilirubin and bilirubinglobin give a similar icteric index and total bilirubin determination. Demonstration of the absence of bile in the urine will usually differentiate hemolytic from the other types of jaundice. Of the many tests, the best is Harrison's test[9] which employs the precipitation of the bilirubin by barium chloride and its subsequent oxidation to biliverdin by Fouchet's reagent.

The absolute proof of increased hemolysis is the demonstration of increased fecal urobilinogen. To be accurate, the determination should be done on at least a 24-hour specimen or preferably upon the fecal output of four days, the principal method being that of Watson.[24] An increase above 250 mg. in 24 hours is significant. Since not only the rate of hemoglobin destruction but the total mass of hemoglobin is important in determining the excretion of urobilinogen. Miller and Dameshek[14] calculate their hemolytic index as follows:

$$\frac{\text{24-hour fecal urobilinogen in mg. x 100}}{\text{Hemoglobin in gm. per 100 cc. x blood volume} \div 100}$$

The normal index is 11 to 20.

Practically speaking, the determination of 24-hour fecal urobilinogen is not done in most laboratories and the determination upon a single fecal specimen may be misleading. The determination of urobilinogen in a fresh afternoon urine specimen will give a working approximation of the fecal urobilinogen. The method of Wallace and Diamond.[21] which employs the addition of Ehrlich's aldehyde reagent to twofold dilutions of urine, is simple. If a pink color is detected in a dilution of greater than 1:20, the urobilinogen is increased. False low values may obtain if the urine is allowed to stand so that the urobilinogen is oxidized to urobilin or if the oral administration of antibiotics has changed the intestinal flora so that the bilirubin is not reduced to urobilinogen.[10] In porphyria, porphobilinogen will give a positive reaction in high dilution.

Intravascular hemolysis will increase the plasma hemoglobin above the normal 5 mg. per 100 cc. Gross increases may be detected by the pink color of the plasma. Bing and Baker[1] have developed a quantitative benzidine method. It is necessary, of course, to use extreme care in drawing the blood in order not to produce technical hemolysis in the test tube.

The urine should always be tested for hemosiderin. A simple test in which the urine sediment is mixed with an equal part of 30 per cent ammonium sulfide solution has been devised by Cook.[7] The reaction to this test is always positive in nocturnal hemoglobinurina, and frequently in other hemoglobinurias.

Hematological reactions. The erythrocytes vary from normocytic to macrocytic, the degree of macrocytosis being dependent somewhat upon the rapidity of erythrocyte regeneration. Except in Cooley's anemia and uncommonly in sickle-cell anemia in the young, the cells are well filled with hemoglobin. Polychromatophilia and nucleated erythrocytes are roughly proportional to the severity of the anemia and the regenerative ability of the bone marrow. Frequently there is basophilic stippling of the erythrocytes. With severe hemolysis, especially if it occurs intravascularly, fragmented and ghost cells may be observed on the blood smear. In Cooley's anemia and sickle-cell anemia, target cells are present.

Supravital staining with cresyl blue permits counting of the reticulocytes, the best single measure of the physiological activity of the bone marrow. During the regenerative phase following a hemolytic crisis the reticulocytes may number 80 to 90 per cent of the total erythrocytes. A normal reticulocyte count is rare in hemolytic anemia, although Dameshek[7] recently gave examples of acquired hemolytic anemias with low reticulocyte counts before therapy with ACTH. After therapy there was reticulocytosis. (The author has seen one example of this.)

Spherocytes are readily identified on the stained smear by the technician who looks for them. They are to be seen on those well spread portions of the smear where the erythrocytes are neither crenated by the slow drying or excessively spread out. A decreased mean cell diameter with normal mean corpuscular volume and normal mean corpuscular hemoglobin indicates spherocytosis. On a wet mount, spherocytes may be recognized by their rounded shape and inability to form long rouleaux. Spherocytes indicate hemolytic anemia—unless the patient has recently received a blood transfusion. Transfused cells, especially if they have been previously stored, may become spherical. A spherocyte is a congenitally fragile cell or one which has become damaged by some means.

The blood platelets are usually normal unless altered by the underlying cause of the hemolysis.

Unless influenced by the primary condition, the number of leukocytes is normal or often increased with a relative increase in the number of immature neutrophils during acute hemolysis. Evans[8] noted that in certain hemolytic anemias there is thrombocytopenia and neutropenia, suggesting the relationship of these three entities and abnormal antibody formation. Pronounced erythroid hyperplasia occurs in the bone marrow, involving all stages of erythrocyte maturation but especially the pronormoblast phase. A reversed myeloid-erythroid ratio with many pronormoblasts and orthochromatic normoblasts suggests the possibility of hemolytic anemia but bone marrow examination is chiefly of value in ruling out megaloblastic anemia, hypoblastic anemia, and leukemia.

The previously mentioned basic tests on blood, bone marrow, and urine may be done in any clinical laboratory or in the physician's office and the

results will usually establish the presence or absence of hemolytic anemia. The disease may be any of the various kinds in the following classification, and there are means for the specific diagnosis of each kind:

CLASSIFICATION OF THE HEMOLYTIC ANEMIAS

Anemias due to defect in the erythrocyte

1. Congenital hemolytic anemia
2. Sickle-cell anemia
3. Cooley's anemia
4. Congenital nonspherocytic hemolytic anemia (Haden)
5. Nocturnal hemoglobinuria
6. Ovalocytosis with hemolytic anemia
7. Pernicious anemia (the role of hemolysis is a definite although a minor one)

Acquired hemolytic anemias due to causes other than erythrocyte defect

1. Protozoan parasites; malaria
2. Bacterial or animal toxins: *B. Welchii*, snake venom
3. Chemical agents: Chlorates, benzene
4. Thermal burns
5. Intravascular hypotonic solutions: Prostatic resection
6. Symptomatic group: leukemias and lymphomas.
7. Allergic sensitization: Favism
8. Antibody group
   a) Iso-agglutinin reactions: Incompatible blood transfusions, erythroblastosis fetalis
   b) Paroxysmal cold hemoglobinuria (syphilitic)
   c) Anemia due to cold hemagglutinins
   d) Anemia due to "irregular" iso- and auto-hemagglutinins. Most of these were formerly classified as idiopathic acute or chronic hemolytic anemia
9. March hemoglobinuria

Rather than attempt to run through the differential points in the diagnosis of these anemias, special tests of hemolysis and those anemias diagnosed by the tests will be discussed. The order in which the tests should be done is dependent upon the judgment of the clinician. For example, for a young Negro with anemia, the sickle-cell test should be done first. For an older person with a history of red urine and a positive reaction to a Kahn test of the blood, only the Donath-Landsteiner test may be required to establish the diagnosis of paroxysmal cold hemoglobinuria due to syphilis.

SPECIAL DIAGNOSTIC PROCEDURES

Osmotic fragility. An increase in osmotic fragility is present constantly in congenital hemolytic anemia and inconstantly in various kinds of acquired hemolytic anemia. In sickle-cell anemia and Cooley's anemia decreased osmotic fragility occurs. A screen test is done by adding 0.1 ml. of blood to two test-tubes containing 1 ml. of 0.85 per cent and 0.50 per cent of sodium chloride solution respectively.[12] If hemolysis occurs in the 0.50 per cent solution, then further test should be done by Creed's technique[4] which utilizes a series of tubes with saline solution varying from 0.28 per cent to 0.72 per cent with intervals of 0.04 per cent or the more modern quantitative technique utilizing the photoelectric-cell colorimeter.[20]

Detection of antibodies. The antibody-antigen nature of many of the acquired hemolytic anemias was suspected for years. It was impossible, however, using the conventional method of titrating saline erythrocyte suspensions against the suspected serum, to demonstrate agglutination, except in a few instances.

Rh-positive erythrocytes which would be expected to be agglutinated by the serum from sensitized mothers sometimes did not agglutinate. Indeed, the maternal serum from mothers of erythroblastotic children might inhibit the agglutination of Rh-positive cells by serum known to contain saline effective agglutinins. Thus was developed the blocking antibody test which indicated that more than one type of antibody may be responsible for erythroblastosis fetalis.[25]

Wiener, followed by a host of other investigators, showed that substitution of 20 per cent albumin solution (or many other colloidal media) for saline solution would permit the demonstration of antibodies not only in the serum of mothers with erythroblastotic infants but also in the serum of patients with many kinds of acquired hemolytic anemia which had previously been called idiopathic. Thus was born the conglutination test which, in its modifications, is extensively used.[16, 26] The blocking antibody test is little used at present.

Coombs[3] found that the antibodies absorbed on the erythrocytes of babies with erythroblastosis fetalis could not be removed by repeated washing with normal saline solution. He found that serum from rabbits which had been immunized against human globulin would agglutinate these sensitized cells. This is Coombs' test. The next step was the demonstration of a positive reaction to Coombs' test in certain acquired hemolytic anemias.[11] The direct Coombs' test detects only antibodies absorbed on the cell. To detect antibodies in serum, an indirect Coombs' test is employed. Normal red cells of the same group or group O and varying Rh types are incubated with the serum in question and then, after they have been washed, are exposed to Coombs' serum. A quantitative titration of antibodies may be done by the indirect Coombs' technique, thus supplementing the conglutination test.[12]

The Coombs' test is not invariably negative in congenital hemolytic anemia, as was first thought.

An indirect Coombs' titration will generally detect antibodies in higher titre than the conglutination test. Either or both the direct and indirect Coombs' tests may demonstrate antibodies not detectable by other techniques.

Erythrocytes exposed to a solution of trypsin become more readily agglutinable by serum containing antibodies against this particular cell group. Trypsinized cells Rh_1Rh_2 (CDE-CDE) may be used to detect sensitivity to the Rh group antigens. This will provide an extra safeguard for prospective recipients of blood transfusions.[15]

Persons with acquired hemolytic anemia may possess hemagglutinins or hemolysins effective only in an acid medium so that results of a conglutination or indirect Coombs' test may be negative if done in unaltered serum. The acidification of the serum from the patient will detect these antibodies.[15]

Persons with viral pneumonia or with no other disease at all, may develop hemagglutinins which produce erythrocyte agglutination in the cold. The condition should be looked for as the cause in obscure anemia. An alert technician may provide data by which to establish the diagnosis by observing the clumping of the erythrocytes in the counting chamber. These antibodies do not require complement for agglutination. Mechanical agitation of the clumped cells produces hemolysis; this is probably the mechanism in the body where exposure to cold produces intravascular hemolysis and hematuria. Hemosiderin in the urine is commonly found. With high titres, the erythrocytes may clump at a temperature close to that of the body; with low titres, exposure to 4° C. may be necessary. The reaction to the Donath-Landsteiner test is negative.[18, 27]

Syphilitic paroxysmal cold hemoglobinuria is caused by a hemolysin which becomes fixed to the erythrocytes at 4° C. and produces hemolysis when the erythrocytes are then warmed to 37° in the presence of complement. The defect is not in the erythrocyte; the hemolysin will hemolyze normal cells of Group O or of the same blood group as that of the patient. The sensitized but unhemolyzed cells will give a positive reaction to a direct Coombs' test.[12] A person with positive reaction to a serologic test for syphilis who passes red urine after immersion of a limb in ice water may be presumed to have paroxysmal cold hemoglobinuria. Confirmation can be made by the Donath-Landsteiner test which is not difficult to carry out. Caution should be exercised in chilling a patient suspected of having this disease, as excessive chilling may produce a severe systemic reaction with chills, fever, shock, and urticaria as well as the blood in the urine. A person with hemolytic anemia due to cold hemagglutinins, which were previously discussed, may also have blood in the urine after chilling.

Hemolysis at acid pH (Ham's test).[12] In nocturnal hemoglobinuria the erythrocytes have a defect which causes them to be hemolyzed by the patient's or normal serum at an acid pH. The factor present in normal serum which is necessary for hemolysis is heat-labile but is not complement; it may be Ac-globulin.[5] The complete test is time-consuming, as it involves the following 16 combinations:

5 Per Cent Suspension of Erythrocytes from:	Serum		Acidified Serum		Inactivated Serum		Inactivated Serum Plus Complement	
	P*	C*	P	C	P	C	P	C
Patient	±	±	+	+	0	0	0	0
Normal control	0	0	†	0	0	0	0	0

*P=patient; C=control.

†Certain cases of hemolysin or hemagglutinin effective at acid pH will produce hemolysis in this tube.

The complete test is rather time-consuming and if the pH is too low, hemolysis of normal cells may occur. Thus a simple screening test suggested by Ham[12] is useful. Five milliliters of clotted blood from the patient and the same amount from a control are incubated at 37° C. and observed for six and 12 hours. Hemolysis in the tube containing the blood from the patient suggests nocturnal hemoglobinuria, or acquired hemolytic anemia due to an antibody, or sometimes congenital hemolytic anemia; and if that occurs, the complete Ham test must be done.

Detection of sickling. For a long time it has been known that in about 7 per cent of the American Negroes some of the erythrocytes assume a sickle shape when the hemoglobin is in a reduced form. This property is hereditary, being dominant. Pauling[17] observed that the hemoglobin in cells that sickle is of a different molecular weight than normal hemoglobin. The majority of persons in whom this phenomenon occurs have no symptoms but 1 per cent of them have hemolytic anemia with all the characteristics of increased hemolysis. In examination of blood from persons with severe forms of the disease, sickling may be observed on the blood smear or in the counting chamber. This obvious sickling associated with reticulocytosis, leukocytosis, nucleated erythrocytes, and target cells leaves no doubt as to the diagnosis. In the sickle-cell trait and in mild forms of the disease, however, special techniques are required to bring out sickling.

A simple technique has been used for this purpose at the Los Angeles County Hospital. A drop of blood is placed upon a drop of dried cresyl blue on a slide, a cover slip placed over the drop and the edges sealed with vaseline. The preparation is examined at the end of 24 hours for sickling, and at the same time a reticulocyte count is done. Sickling may be demonstrated within 30 minutes by equilibrating the blood with carbon dioxide or by using reducing agents such as sodium metabisulfite.[6]

Mechanical fragility. The measurement of mechanical fragility is not adaptable to the ordinary laboratory. At present the information gained does not warrant its use except in research. The technique is given by Ham.[13]

Miscellaneous conditions. Diagnosis of hemolytic anemia of the symptomatic group depends upon demonstration of an underlying disease known to produce hemolysis. Inconstant spherocytosis, increased osmotic, acid, and mechanical fragility, and a positive reaction to direct Coombs' test[19] may be observed. Hemagglutinins may be inconstantly demonstrated in the serum by the indirect Coombs' test or conglutination test.

There is at the present no practical laboratory test for the confirmation of the diagnosis of Cooley's anemia. A Mediterranean parentage and a blood smear characteristic of thalassemia minor in at least one of the parents will establish the diagnosis.

Hypochromic anemia that is not due to chronic blood loss or infection and which does not respond

to adequate doses of parenteral iron may be Cooley's anemia.

Toxic hemolytic anemia due to chemicals is generally acute. Diagnosis depends upon the exclusion of the other causes of hemolysis and a history of prolonged or extensive exposure to chemicals known to be capable of producing hemolytic anemia. Abrupt onset in persons previously healthy is an important clue. Generally antibodies are not demonstrable.

960 East Green Street.

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Fistulas Following Gastrectomy

R. Bruce Henley, M.D., *Oakland*, and H. Glenn Bell, M.D., *San Francisco*

SUMMARY

Postoperative fistula occurred in 16 of 761 cases in which subtotal gastrectomy was done. Twelve of the 16 patients died.

In the majority of cases complications arose because of the anatomical location of the ulcer with surrounding inflammation.

Abrupt and dramatic onset of symptoms following leakage occurred in only a few cases. Perforation occurred in a few cases after the patient had been discharged home well and asymptomatic.

Obstruction of the proximal limb was not present in any of the cases in which postmortem examination was carried out.

The exclusion operation with resection of antral mucosa may not be a safe procedure. For treatment of ulcer which cannot be removed, gastroenterostomy with vagotomy is advised.

SUBTOTAL gastrectomy was done in 761 cases at the University of California Hospital in San Francisco from January 1, 1930, to January 1, 1951. In 16 cases (2.1 per cent) fistulas of the duodenum, antral stump and biliary tract developed postoperatively (Table 1) and 12 of the 16 patients died. Careful analysis of these 16 cases brings out several important points, some of which have not been particularly stressed in the literature.

Clinical Features. Fourteen of the patients were males and two were females. The age range was from 35 to 62 years. In 14 cases the operation was done because of chronic duodenal ulcer, in one because of gastric ulcer, and in one because of prepyloric carcinoma of the stomach. Resection was of the Mayo-Polya type in all cases. Antecolic anastomosis was carried out in five patients, and two deaths occurred. Retrocolic anastomosis was made in 11 patients and ten of them died.

Symptoms. The onset of symptoms indicating intra-abdominal complication of some kind occurred in most patients within the first six days, usually within two to three days, after operation (Table 2). However, three patients had apparently recovered and had been discharged home before untoward symptoms appeared 20 days, 41 days and four months later. The last-mentioned patient had gained 35 pounds and had been feeling well prior to the onset of pain.

From the Division of Surgery, University of California School of Medicine, San Francisco.

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In only four patients was the onset of intra-abdominal complication abrupt and dramatic in character. Sudden, severe pain was the predominant symptom and was located in the periumbilical or epigastric region, or right or left upper quadrant of the abdomen. Two patients noted radiation of pain to the neck or shoulder region. In spite of immediate operation three of the four patients died. In the remaining 12 patients the onset of symptoms was more gradual, characterized in general by intermittent cramp-like abdominal pain accompanied by increasing distention and absence of peristalsis, increase in pulse rate and variable rise in temperature. In several patients the intra-abdominal complication was completely masked by pulmonary complications or was not recognized until the presence of an abdominal mass or subphrenic abscess became apparent.

Adequacy of Stump Closure. In the earlier cases in the series, duodenal stumps were closed with two layers of continuous catgut followed by a single row of interrupted silk or cotton sutures. Later, the closure was generally made without the continuous catgut. Four patients were known to have a completely adequate duodenal closure since in two patients the primary lesion was in the stomach and in the other two the duodenal ulcer was healed at the time of operation. Death was due to a proven duodenal fistula in both patients with primary stomach lesions.

In the remaining 12 cases a chronic posterior duodenal ulcer was present and dissection was difficult. In four of these 12 cases the ulcer was excluded by dividing the stomach near the pylorus and excising the antral mucosa. Three of these four patients died. In two additional patients fistulas developed following the exclusion operation without

Table 1.—*Fistulas Following Gastrectomy*

Location of Fistula	Number
Antral stump	
With excision of mucosa	4
Without excision of mucosa	2
Duodenum	5
Common duct	2
Biliary drainage, exact source undetermined	3

Table 2.—*Onset of Symptoms*

Time of Onset	Number Patients
Second to sixth postoperative day	13
After hospital discharge	3
20 days; died; duodenal fistula	
41 days; recovered	
4 months; died; antral fistula	

excision of the mucosa and both patients died. In the remaining six patients the ulcers were excised. Dissection was difficult but presumably the closure was considered adequate except in one case in which drains were placed around the stump and brought externally through a stab wound. In that case the patient died following a series of intra-abdominal complications (Table 3).

TABLE 3.—*Adequacy of Stump Closure*

	No. Cases
Excellent 2 primary lesions in stomach; 2 deaths 2 duodenal ulcers healed, scarred.	4
Ulcer excluded, antral mucosa excised, 3 deaths	4
Ulcer excluded, antral mucosa intact; 2 deaths	2
Difficult, deep posterior penetrating ulcers; 5 deaths	6

Postoperative Complications. Table 4 indicates the secondary operations carried out for the various kinds of complications, and autopsy findings in 10 of the 12 fatal cases. In postmortem examination in eight cases of proven duodenal or antral stump fistula, no evidence of proximal limb obstruction was observed. Perforation occurred in three of four cases in which the antral mucosa had been excised. In two cases injury to the common duct was observed.

DISCUSSION

This study brings out some important points. The incidence of postoperative fistula was higher in patients who had had a retrocolic anastomosis than in those who had had antecolic anastomosis.

TABLE 4.—*Postoperative Complications*

Case	Secondary Operations	Recovered	Autopsy Findings
1	Incision and drainage left subphrenic abscess. (Antral mucosa excised; stump had poor color following first operation.)	Yes	.....
2	Incision and drainage right subphrenic abscess.	No	Duodenal fistula
3	Exploratory laparotomy; no drains. Pancreatitis(?)	No	Duodenal fistula
4	Exploratory laparotomy; drains inserted. Peritonitis. Fistula probably at gastroenteric anastomosis.	Yes	.....
5	Exploratory laparotomy; drains inserted. Peritonitis. Probable duodenal fistula.	No	None
6	Incision and drainage right lower quadrant abscess. Cholecystoenterostomy. Exploratory laparotomy.	No. Complete biliary fistula	None
7	Incision and drainage deep wound abscess. Left subphrenic abscess. Empyema left pleural space.	Yes. Biliary fistula	.....
8	Exploratory laparotomy; drains inserted. Peritonitis. Duodenal fistula.	Yes	.....
9	Exploratory laparotomy. Peritonitis. Drainage. Antral fistula closed with sutures.	No	Antral fistula Antral mucosa not excised
10	Exploratory laparotomy. Peritonitis. Drainage.	No	Common duct fistula
11	Wound drained spontaneously. Peritonitis.	No	Antral fistula Antral mucosa excised
12	Wound drained spontaneously. Peritonitis.	No	Antral fistula Antral mucosa excised
13	None.	No	Antral fistula Antral mucosa excised
14	Exploratory laparotomy; no drains. Peritonitis. Fistula closed with sutures.	No	Antral fistula Antral mucosa not excised
15	None.	No	Duodenal fistula Peritonitis
16	None.	No	Common duct fistula Left subphrenic abscess

This fact in itself may not be too significant, but there are other reasons for favoring the antecolic anastomosis. It is easier to perform, a higher resection can be obtained, and there is less chance for obstruction of the distal limb in an obese person.

Abrupt onset of symptoms was noted in only a few cases. In general, symptoms developed more gradually and in some cases the true nature of the complication was not immediately apparent. Early diagnosis and prompt drainage of the stump area are essential. It is to be noted that leakage of the duodenal or antral stump may occur as a late complication after the patient has been discharged home perfectly well.

The experience in this limited number of cases would indicate that excision of gastric mucosa in antral exclusion operations is not a safe procedure.

The duodenal closure may be difficult following the excision of a deep-seated posterior ulcer. Some factors leading to postoperative leakage in this situation may be inability to obtain a good turn-in, inability of the sutures to hold in the inflamed, edematous tissue, or interference with the blood supply of the duodenum. There was no evidence of obstruction of the proximal limb in any of the postmortem examinations, although this factor was cited by Robinson[3] as the primary cause of duodenal fistulas. Duodenal leakage occurred in four cases in which the duodenum was normal and there was no apparent reason for the leakage.

Peritonitis and its attendant complications caused death relatively early in 11 of the 12 fatal cases. In only one case was there long-standing bile drainage, resulting in the various problems of adequate fluid replacement. The patient, who had a complete biliary fistula, died 63 days after the original operation. In a patient with a long-standing fistula, the precise area of perforation should be determined by the injection of radiopaque media through the external fistula or via the proximal limb of jejunum. The authors believe that when a complete biliary or duodenal fistula is present and persists after a suitable period of observation, an attempt should be made to close the fistula surgically. The operative mortality may be high, but eventually all patients with complete fistula will die if the fistula remains complete.

When a sudden, acute duodenal blowout is suspected, immediate drainage should be instituted through a right subcostal incision. Attempts to close the fistula at this time are usually futile. If possible, some effort should be made to ascertain that the leak has occurred at the duodenal stump, and not at the gastroenteric stoma or in the region of the ligament of Treitz as sometimes happens when there is obstruction of the proximal limb.

The management of a deep-seated posterior duodenal ulcer is often a challenge to the most skillful surgeon. It is often advisable after dissecting down to the region of the ulcer to insert the tip of the index finger of the left hand into the open duodenum and use this as a guide. Perhaps a tube in the common duct, as suggested by Lahey,[2] should be used more often in the deep-seated ulcers that are low in the duodenum. If the stump closure is considered questionable, soft rubber drains should be inserted down to the region of the stump and brought out through a stab wound. In such a situation, Hoerr,[1] of the Crile Clinic, has in several cases inserted a soft rubber catheter into the duodenal stump and established direct external drainage. This has been a safe and simple procedure in his hands.

Obstruction of the proximal limb can be prevented by inspecting the ligament of Treitz to be certain that there is no twisting or angulation there. There should not be too much tissue turned in at the proximal jejunal opening, and twisting and angulation should be avoided. Placing the tip of a nasogastric suction tube into the proximal limb may be of some aid.

It is believed that in most instances, by careful dissection, difficult duodenal ulcers can be removed. While not entirely convinced that vagotomy with gastroenterostomy is the procedure of choice for treatment of an ulcer which cannot be removed, the authors prefer it to the exclusion operation and have used it more frequently in recent years.

418 Thirtieth Street.

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Use of Free Grafts in Correction of Recurrent Pterygia, Pseudopterygia and Symblepharon

Deane C. Hartman, M.D., *Los Angeles*

SUMMARY

Use of conjunctival material for grafting over areas of the eye denuded by removal of a pterygium, pseudopterygium or symblepharon gives better results cosmetically, and in some instances functionally, than either thin split skin or mucous membrane from the mouth. A technique for grafting with conjunctiva is described.

THE repair of recurrent pterygium, pseudopterygium, and symblepharon frequently necessitates the use of free graft to cover the denuded area over the sclera and into the cul-de-sacs. Usually either split skin,[8] mucous membrane,[1, 8, 10] or conjunctiva[2, 3, 4, 6, 7, 9] is used for this purpose.

Thin split skin will "take" very well, but the desquamating epithelium is very poorly tolerated by the cornea. Also, the graft becomes thicker and whiter—more unsightly—as it grows.

Mucous membrane from the mouth is available in relatively large amounts; it may be removed from either inside the lower lip or inside the cheek anterior to Stenson's duct. It shrinks moderately but grows fairly well and is tolerated by the cornea. However, it tends to remain a deep red color even with the passage of time. The thinner the graft, the less the primary contraction. It is most important to trim the graft thoroughly, allowing 10 per cent for primary contraction. The method described by Macrae[5] is an excellent one. The strip of mucous membrane, when removed, is laid across the palmar aspect of the left index finger, raw surface exposed. The ends or points of the graft can then be controlled by means of the thumb and side of the middle finger, which may be necessary when dealing with a graft which has been cut a little too thickly and thus tends to curl in. All fat and submucous tissue must be removed with fine scissors until the graft is so thin that, were it not kept on the finger during the process, it would be difficult to tell which was the raw surface. The lip wound may be sutured later; while the material is being prepared, bleeding at the donor site may be controlled by pressure.

The mucous membrane graft is transferred to the already denuded area on the globe and sutured into place with interrupted 6-0 black silk. The graft is trimmed as necessary at the time of suturing. Care must be exercised to cover areas well into the cul-de-sac. It may be necessary to use double arm 4-0 silk sutures carried from the cul-de-sacs to the outside and tied over pegs. The caruncle should be preserved if at all possible and not covered with a graft.

A plastic oval conformer with a central opening a little larger than the cornea is introduced to hold the graft well into the cul-de-sacs and allow some pressure to be placed over the graft.

In estimating the size of graft required, it is helpful to know the anatomical facts concerning the human eye. The superior conjunctival fornix corresponds nearly with the superior palpebral skin fold.[11] The conjunctival fornix lies 8 to 10 mm. from the corneal margin above and below, and 7 mm. from the internal canthus. With the eye closed the conjunctival fornix is distant from the palpebral fissure 20 to 25 mm. above and 9 to 12 mm. below.

There are few references in the literature to the use of conjunctiva.[2, 3, 4, 6, 9] Advantages of this material are that it is easy to procure in most instances, it heals into place well, and it matches the cornea better than other materials. It may be taken from either the affected or the opposite eye. The major disadvantage is the limited amount available. A technique of grafting with conjunctiva which the author has found satisfactory is as follows:

The upper lid is everted over a large-sized Desmarres retractor held on the skin surface. A 2 per cent solution of procaine with epinephrine 1:40,000 is injected with a 27-gauge needle just under the conjunctival surface 3 to 5 mm. posterior to the superior edge of the tarsus. Several small amounts are injected along the line to balloon the conjunctiva so that it resembles a long sausage. With the conjunctiva thus stretched, a strip 20 mm. long by 10 mm. wide is outlined with a sharp knife and then carefully undermined longitudinally, with the point of the scissors kept close to the conjunctiva. The ends are then cut free and a 6-0 black silk suture is placed through each corner to aid in identifying the epithelial surface, in handling the graft, and in stretching it immediately after it is transferred to the recipient area. As the conjunctiva has been stretched vertically by the previously mentioned injection, it immediately contracts about 30 per cent so that the width of 10 mm. reduces to approximately 7 mm. The graft is sutured into place, care being taken to cover the cul-de-sacs if necessary. A plastic conformer is placed in the eye. The donor area is sutured with 6-0 black silk.

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A dressing of fluffed gauze, kept under moderate pressure with adhesive tape and a head roller bandage, is used. The dressing is changed in five days and every three days thereafter. The conformer and sutures are removed in two weeks.

The results in a small series of cases have been most favorable. There is a shortening of the upper cul-de-sac where the graft was removed but not enough to produce subjective symptoms.

1136 West Sixth Street.

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Discussion by Orwyn H. Ellis, M.D., *Los Angeles*

Regarding skin grafts to cover sclera and repair conjunctival defects, I heartily agree with Dr. Hartman that dermal grafts are unsightly, have a copious foul-smelling mucopurulent discharge, and are rarely if ever indicated. I have made infrequent use of mucous membrane for grafting. It is almost never necessary to suture the lip or mouth wound, unless the deeper structures have been inadvertently entered.

Conjunctival grafts interest me most. In traumatic wounds or chemical burns, usually the upper fornix remains uninjured and can be ballooned as Dr. Hartman has described. Then the conjunctiva from the fornix of the same eye is swung down as a large pedicle graft or excised as a free graft to cover the defect of the bulbar conjunctiva, to line at least one side of a symblepharon or wherever it is indicated to suture in place. In this regard one point should be mentioned. It is not necessary to suture or even to try to approximate the area from which the graft, either free or pedicle, was taken—provided that only the conjunctiva was removed and the underlying tissue was not injured in taking the graft. Shortening of the cul-de-sac has not been observed if the stent remained in place three weeks. The chance of injury is greatly lessened by the subconjunctival procaine injection, which should be carried out whether the operation is to be done with general (which I prefer) or local anesthesia. The conjunctiva quickly regenerates without defect with the stent in place, and is usually fully healed without contracture in three weeks, at which time the large pressure dressing can be permanently removed.

In cases in which pterygia repeatedly recur after simple excision (which, in my opinion, has the most to offer of all the operations for pterygium) I have done a lamellar or split-thickness corneal graft with success. In such cases, this procedure, rather than repair using conjunctiva or mucous membrane, is indicated. After excision of the recurrent area from the cornea by corneal splitting, a split-thickness graft from a donor eye, cut to fit the defect in the host cornea, is applied with direct suturing. Tract sutures have been found to ease considerably the task of suturing the corneal graft in place.

Apoplexy in Young Adults—Diagnostic and Therapeutic Observations

Edwin Boldrey, M.D., *San Francisco*

SUMMARY

Apoplexy in young adults is due to rupture of an artery or to obstruction, as by clot, by embolus, or by transitory vasospasm. In differential diagnosis, tumor and demyelinizing disease must be considered.

Spinal fluid study helps to differentiate between hemorrhagic stroke and stroke due to vascular block. In hemorrhagic stroke, search for the site of bleeding is imperative and angiography, the preferred method of study, should be carried out as soon as the patient's general condition permits.

In vascular occlusive stroke, measures to maintain the blood pressure and to dilate collateral channels are often helpful. Stellate block is most valuable in the acute phase immediately following embolism or thrombosis. In a small percentage of chronic cases, stellate block may be followed by significant recovery of function. Benefit may also be derived at times from systemic vasodilators such as niacin and intravenously administered histamine.

APOPLEXY, also referred to as "stroke," is the sudden diminution or paralysis of consciousness, sensation or voluntary motion resulting from the rupture or obstruction of an artery of the brain. The evidence of apoplexy may include any or all of the three objective factors either singly or in any combination.

Traditionally apoplexy has been regarded as one of the degenerative diseases affecting principally persons in the later years of life. Its occasional occurrence in young adults has been the object of intensified interest in recent years because of the development of improved modes of diagnosis and subsequent refinement of therapy. Young adults, by which is meant those persons who have not yet passed the fifth decade, may be subject to the same deteriorative diseases as are their elders. In addition, a considerable number of vasospastic diseases and embolic phenomena occur in this age group, and the likelihood of congenital anomalies, particularly saccular aneurysm and arteriovenous angioma, is greater. The general tissue reserve of young adults permits a wider range of therapeutic trial and provides a more substantial basis for objective evaluation of treatment.

The diagnosis of apoplexy in young adults, while generally simple, may on occasion be complicated. Other lesions capable of abrupt onset, such as brain tumor, or demyelinizing disease such as multiple sclerosis, may be initiated in a similar fashion. Differentiation between hemorrhagic stroke and that due to vascular blockage may also be complex, although as a rule the presence or absence of blood in the spinal fluid will permit a ready distinction between the two. The value of angiography in identifying and localizing the lesion has become widely recognized, although here, too, limitations are imposed which, if ignored, will lead to false deductions.

The immediate causes of apoplexy fall readily into two categories: Vascular occlusion, and vascular rupture. Of these, occlusion will be considered first. Vessels leading to the brain or its subdivisions may be blocked by an embolus, by vascular spasm, or by a thrombus. Any of these may occur at any time and apparently in any circumstances, although thrombus is more liable to occur in a situation where the rate of blood flow is reduced.

The diagnosis of embolism is made when, associated with apoplexy, a potential source of embolus —such as cardiovascular thrombus, dislodged fat, or air—is recognized. Postpartum stroke also is felt to belong to this category.

In certain circumstances the onset of stroke from embolism may be heralded by a convulsive seizure. Involvement of consciousness may be associated with block of a large vessel or with interruption of certain of the smaller channels. Sensorimotor function is more commonly involved on the right side of the body, representing cerebral embolism on the left side, probably because of the mechanics of the vascular supply.

Spinal fluid pressure ordinarily is not elevated following embolic stroke, and in the acute stage the cell and chemical contents of the fluid are not materially altered. The block may be followed by extravasation of blood by diapedesis and later there may be frank rupture of the vessel due to the weakening of the vascular wall, but it is unlikely that these will play any major part in verifying the diagnosis of cerebral embolism. In the late stages, also, increase in the protein content of the cerebrospinal fluid may occur, particularly if an extended area of the brain surface has been affected.

Embolic apoplexy offers one of the most favorable situations for the therapeutic use of the anes-

From the Division of Neurological Surgery, University of California School of Medicine, San Francisco.

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thetization of the cervical sympathetic chain, so-called "stellate block." Many times the patient is already under direct medical care because of the situation providing the source of the embolus; hence immediate treatment is possible with the result that damage to the cortical cells is minimal. Oftentimes the initial sympathetic block is all that is necessary, and if this is carried out within the first few minutes of onset, the return of function may be dramatic. Generally the use of niacin in a dose of 100 mg., from one to three times a day for several days after the stroke, seems desirable.

Vascular spasm may be confused with cerebral embolism as the cause of apoplectic ictus. Usually this is associated with other peripheral vascular disease, particularly arterial hypertension. In the young hypertensive person the appearance of vasospastic phenomena of itself indicates a vascular lability later eliminated by the sclerosing effect of degenerative disease. The vasospastic process may mimic embolism or thrombosis; it is recognized, of course, that vascular spasm is a significant factor in embolism, thrombosis and hemorrhage. The isolated effect of spasm alone seldom produces complete occlusion: the degree of effect, therefore, is usually not as great as when other factors are involved. This state of incomplete interruption of the blood flow permits of more latitude in time than with thrombosis or embolism.

In stroke due to uncomplicated vasospasm, the cerebrospinal fluid pressure, cell count and chemical contents are at first usually within normal limits. The onset of the disease is usually not quite so abrupt as with embolus or hemorrhage. Again the patient is often already under supervision and the onset of ictus immediately brought to the attention of a physician acquainted with the medical background. When cervical sympathetic block on the ipsilateral side is carried out early there is often rapid clinical evidence of the return of cerebral function, frequently dramatically manifested. Since the underlying process in vasospasm usually persists, recurrent episodes are not uncommon.

Thrombosis of cerebral vessels again presupposes vascular disease. Thrombosis may follow embolism or vasospasm and often occurs as a delayed manifestation in hemorrhage. Atheromatous plaques may provide the basis for the accumulation of clot. Interruption of the continuity of the endothelium is thought to be essential to the development of clot. It is well recognized that slowing of the rate of blood flow is a major contributing factor. Thrombosis producing apoplectic manifestations may occur in the vessels within the cranium itself or in the internal carotid artery distal to the bifurcation of the common carotid. Thrombosis in the cervical area is not uncommon and is usually followed by strikingly diffuse manifestations which vary to some degree depending upon the amount of collateral supply from other vessels contributing to the circle of Willis. The apposition of the internal carotid artery to the lateral surface of the atlas may result in demonstrable constriction of the artery, slowing the blood flow and occasionally producing thrombus at this point. Thrombosis in the basilar artery never, and in the vertebral artery seldom, is compatible with life.

Thrombosis, when recognized as an acute problem, may be treated with some success in the manner that is suggested for embolism and vasospasm. In a considerable number of cases the problem is one of chronic paralysis, probably the result of thrombosis. Occasionally the differentiation between thrombosis and hemorrhage will be difficult in these chronic situations. In such circumstances cerebral angiography is strongly advocated. In angiographic studies, angioma and aneurysm have been encountered in some cases, and extensive thrombotic involvement of one or both internal carotid arteries also has been observed. The information thus obtained is most valuable in advising the patient as to therapy and in estimating prognosis.

The treatment of chronic effects of thrombosis produces a less satisfactory result than that which may reasonably be anticipated in the acute stage. Many of the patients have profound emotional as well as sensory and motor afflictions, the former representing extensive basal ganglion involvement. It is necessary for both physician and patient to recognize at the outset that return to completely normal function is unlikely. Interruption of the cervical sympathetic nerve by procaine has been tried. Electroencephalograms taken immediately before and after the block, and careful objective and subjective analysis of change in the sensorimotor or emotional spheres, provide the basis of evaluation. If the result of chemical nerve block seems adequate, cervical sympathectomy or stellate ganglion decentralization may be indicated. Repeated stellate block will be disappointing, for the effectiveness of the local anesthetic agent has been observed to diminish rapidly. Intravenous histamine injections, suggested by Furmanski,[1] have been of value in instances where a surgical procedure does not seem justified. The administration of 1 mg. of histamine in 250 cc. of Ringer's solution or 5 per cent dextrose solution, intravenously, at a rate sufficient to produce a flush, and repeated as often as three times a week, has been followed by significant somatic and emotional improvement.

Embolism, vasospasm and thrombosis are all secondary manifestations of some underlying disease in the body. The necessity of treating the underlying disease must, of course, always be remembered and the cerebral problem regarded in its true situation as only one aspect of a general medical problem.

Apoplexy due to hemorrhage is the other broad division of this general problem. In young adults, cerebral hemorrhage may often be the result of rupture of a congenital saccular aneurysm or the result of rupture of vessels in an arteriovenous angioma. Hemorrhage may also result from vascular tear at the site of an arteriosclerotic plaque, from arteriovenous fistula, or from degenerative change in a tumor.

Hemorrhagic stroke in young adults can occur at any time. A demonstrable association between the onset and some physical or emotional strain is not consistently observed. It is reasonable to assume that rupture of a weak spot in the vascular tree is more liable to occur when factors which elevate the blood pressure come into play. However, hemorrhage is known to have occurred while the patient was engaged in conversation, while shaving, while lying in bed, after awakening in the morning, and while indulging in many other of the normal daily activities of life not generally associated with a particular alteration in blood pressure.

The hemorrhagic aspect of an ictus is generally diagnosed by the headache progressing to pain and stiffness in the cervical spine or by the overwhelming interruption of all conscious cerebral activity. Usually it can be proved by the demonstration of blood in the cerebrospinal fluid after such an incident. It is possible, however, for intracranial bleeding to occur without immediate significant change in the cerebrospinal fluid. Spinal puncture to establish the diagnosis of brain hemorrhage is felt to be unattended by any significant increase in hazard by reason of possible dislodgement of clot.

Cranial bruit is sometimes heard following hemorrhage, and may indicate an arteriovenous fistula or arteriovenous angioma. On the other hand, hemorrhage into the cranial cavity may distort the vascular tree to such an extent that bruit may result. The presence of bruit is not consistently helpful in determining the site of hemorrhage or even the side on which it occurs. Nor can the vessel bleeding be identified consistently by observation of clinical symptoms preponderantly referable to one side or the other, for aneurysms of the circle of Willis rupturing on its medial aspect may produce their major destruction in the contralateral hemisphere. Hemorrhages from the anterior communicating artery notoriously produce clinical symptoms on either side or even symptoms that suggest a rupture in the posterior part of the head.

The immediate treatment after hemorrhagic stroke is purely supportive in an attempt to permit the brain to adjust to the sudden accumulation of intracranial blood and the clotting mechanism to stem the flow from the tear in the vessel. Indiscriminate ligation of vessels in the neck on clinical grounds alone cannot usually be defended. Bleeding of hypertensive patients to reduce the arterial pressure has theoretical advantages, although the demonstrable evidence of help from this maneuver is open to some question. Cranial decompressive procedures in the acute stage are seldom if ever of sufficient value to justify the additional strain of a surgical procedure carried out at a time of crisis.

Direct and positive approach to the treatment of the bleeding point necessarily rests entirely upon the demonstration of the location and character of the bleeding point by cranial angiography. Angiograms should be obtained as soon after hemorrhage as the patient's general condition permits. Angiography should never be attempted, however, when the patient's condition is precarious. On the other hand, there is as yet no evidence that an injection of Diodrast® or Thorotrast® into the common carotid artery through a needle up to 18 gauge in size will materially increase the pressure in that artery. No rise in pressure was noted in direct readings in a small number of cases.* Actually, in some instances there was an apparent fall in pressure which theoretically might be related to the slowing of the pulse so often attendant upon injection of Diodrast.

Angiograms may demonstrate aneurysm or angioma, or may show no abnormality. For aneurysm arising from the carotid artery itself, ligature in the neck is the preferred treatment. This is usually done under local anesthesia and is sometimes followed by intracranial trapping. A pedunculated saccular aneurysm may be clipped across the neck with a good chance of producing cure. An atheromatous plaque at the base may prevent the accomplishment of this endeavor, however, and such plaques are not demonstrable except by actual observation in the operating room.

For aneurysms distal to the bifurcation of the internal carotid artery into the anterior and middle cerebral arteries, direct approach is necessary — either ligation of the entire vessel upon which the aneurysm arises, or, preferably, if it is possible, ligation across the base of the aneurysm so that the continuity of the supplying vessel is preserved. Aneurysms of the anterior communicating artery are particularly difficult to handle because they frequently receive major supply from both anterior cerebral vessels. The interruption of both is not consistent with life. Some investigators believe that aneurysms in this region should be completely abandoned, and the patient's fate left entirely to chance. In certain instances the aneurysms definitely are not operable; on the other hand, the establishment of a fixed ruling seems unreasonably defeatist.

Arteriovenous fistula has been found to exist between the posterior cerebral artery and the vein of Galen, and between the carotid artery and the cavernous sinus. Often the contributing artery can be interrupted and when this is the internal carotid the procedure is more safely done under local anesthesia. Intracranial trapping, however, may be necessary to achieve adequate block of the fistula.

Arteriovenous angioma, a completely inoperable lesion prior to the development of cranial angiography, is now found to be operable in about 50 per cent of instances. By means of angiography the major contributing vessel can usually be demonstrated, and with experience the auxiliary contributors from the cerebral depths can be anticipated and controlled. Deep-lying angiomas involving the entire thalamus, or smaller ones which have arisen in the vicinity of the vein of Galen, have generally been avoided unless by repeated hemorrhage the excessive danger of the lesion to life becomes evi-

* The readings were taken by Dr. Lawrence Arnstein in the neurological surgery laboratory of the University of California School of Medicine.

dent. Those tumors whose vessels are at all accessible have been operated upon, the purpose being to prevent the patient's dying from massive hemorrhage. Such an end can be anticipated if the angioma is not so approached: In the author's experience a considerable proportion of patients with angiomas that were not operated upon died during the period of observation, usually within a matter of one to three years.

For the third group of patients, those who have had objective evidence of hemorrhage but in whom the arteriogram demonstrates no source of bleeding, sharp limitation of activity with absolute bed rest for at least two months and gradual return to activity approaching normal for the next two months, is recommended. Failure of demonstration of the source of bleeding has been interpreted by the author to mean that the bleeding was from a small tear, as at an atheromatous plaque, or that it was from an aneurysm which had become filled with clot between the time of hemorrhage and the time of angiography. The rationale of absolute bed rest for two months is to give adequate time for the clot to become replaced by scar tissue, which, hypothetically, will be sufficiently firm in that time to justify the gradual reestablishment of normal activity. The patient always is warned against physical or emotional strain on the hypothetical grounds mentioned earlier. This mode of treatment is an adaptation of the so-called conservative treatment which previously was recommended in all cases of cerebral hemorrhage. It has been successful in treatment of patients without demonstrable lesions. But in the author's experience it has not been successful for patients with a demonstrable lesion; in several instances the patients died, some of them during the period of prolonged bed rest.

In evaluating the results of treatment in apoplexy in young adults, it is necessary to recognize first the danger of the underlying disease process, and secondly the probable limitations of any therapeutic measure. In occlusive apoplexy the danger to life is usually greatest at the time of or immediately following the occlusion. The benefit from vasodilating mechanisms is directly proportional to the promptness with which they can be instituted and to the size and location of the vessel affected. In general, vessels mainly supplying the brain cortex react favorably to treatment by vasodilating mechanisms. If the degenerative change is in the white matter or tracts of the brain, the evidence is that no improvement can be anticipated.

In the matter of hemorrhagic apoplexy the danger to life exists until the source of bleeding is controlled or isolated from the circulation. The primary end, then, is preservation of life. A secondary consideration is the limitation of the degree of residual morbidity. Frequently saccular aneurysm, and occasionally arteriovenous angioma, may be adequately dealt with without apparent morbidity. Some morbidity is often associated with the ictus itself where the source is aneurysm, and this can usually be anticipated with angioma. Vasodilating mechanisms may minimize the morbidity from a hemorrhagic ictus to the degree that auxiliary vasospastic phenomena have affected the adjacent cortex. Much hemorrhagic damage is to the white matter, however, and here again no benefit can be anticipated.

The problem of morbidity and mortality must in some way be brought to the consideration of the patient, for in the last analysis he must make the decision. In the author's experience, most patients prefer some incapacity to a continued existence under a Damoclesian sword.

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The Surgical Treatment of Mitral Stenosis

William H. Muller, Jr., M.D., *Los Angeles*

SUMMARY

A surgical procedure known as commissurotomy, devised by Bailey for the relief of certain cases of mitral stenosis, gives promise of considerable benefit to a large number of patients who have the disease. The technique of the operation involves the introduction of the right index finger and an especially designed valvulotome through the left auricular appendage into the left auricle. The mitral valve commissures are then divided. Twenty-five cases of mitral stenosis in which this operation was performed are discussed.

COMMISSUROTOMY is rapidly becoming the accepted surgical treatment for the relief of mitral stenosis. The procedure was devised by Bailey in 1948,[2] and subsequent reports[3,8,9,15] have given additional evidence that this procedure is beneficial to patients with mitral stenosis. In this communication data are given on 25 cases in which commissurotomy was performed.

The development of a satisfactory procedure for the surgical relief of mitral stenosis is a tremendous advance in the field of cardiovascular surgery. It is the first step toward the treatment of intracardiac deformities by direct attack upon them. Moreover, it opens the field for the further development of procedures for the relief of other acquired cardiovascular diseases. The success of the procedure attains greater significance when the prevalence of mitral stenosis is considered. It probably occurs more frequently than any other kind of valvular cardiac lesion. Bailey[2] estimated that at least one million people in this country have the deformity and that one fourth of them are candidates for surgical treatment.

The most logical approach to the problem of the relief of mitral stenosis is the prevention of rheumatic fever. Although at the present this cannot be accomplished, studies by various investigators have indicated that giving adrenocorticotropic hormone (ACTH) or related compounds during the acute stage of rheumatic fever shortens the course of the disease and may lessen or prevent residual cardiac damage.[7, 12, 14, 21] As Bailey noted, only a minority of patients with mitral stenosis have symptoms severe enough to necessitate surgical relief. These patients have rapidly progressive symptoms of dyspnea, pulmonary edema and hemoptysis, which culminate in death. Wolff and Levine[23] stated that 66 per cent of patients who have serious hemoptysis die within three years after the onset of hemoptysis. Levine[13] also stated that the average length of time between the appearance of congestive heart failure and death is less than five years. Young women under the age of 30 make up the largest group of patients with progressive mitral stenosis and congestive heart failure.

In most patients to be considered for operation the diagnosis offers no problem. However, very early lesions might present some difficulty. It is helpful to obtain a history of rheumatic fever. Such a history can be obtained in as high as 70 per cent of patients with rheumatic heart disease. In another 5 to 10 per cent a history of chorea without rheumatism usually may be obtained. In early cases in which complaints only of increasing exertional dyspnea or easy fatigability are elicited, cardiac enlargement is not a prominent finding, although in fluoroscopic examination enlargement of the left auricle and right ventricle may be observed. If there is mitral valve obstruction of long standing, however, the heart is usually greatly enlarged. A presystolic murmur of "crescendo" type which is heard best at the apex and referred to the axilla is characteristic. A systolic murmur, which may be present in some cases, indicates mitral regurgitation. A thrill over the apical region may be associated with the diastolic murmur. Increasing fatigability and progressively increasing exertional dyspnea may be the only symptoms in some cases; in the more advanced ones, however, a history of embolic phenomena and of dyspnea, orthopnea, pulmonary edema and hemoptysis often may be obtained.

The concept of the surgical treatment of mitral stenosis is not a new one. In 1902 Sir Lauder Brunton,[5] an English physician, upon noting pronounced stenosis and calcification in the mitral valve of a patient who had died of rheumatic heart disease, concluded that surgical incision of the stenotic valve provided the only method of treating advanced mitral stenosis. It was not until 1922, however, after improvements had been made in thoracic operations and in anesthesia for thoracic operations, that mitral valvulotomy was attempted. At this time Cutler and Levine[6] excised a portion of one of the leaflets of the mitral valve in four patients. They based their procedure upon the hypothesis that the patient could withstand mitral regurgitation better than stenosis. They excised a portion of one of the leaflets to relieve the stenosis although they knew that the degree of insufficiency simultaneously would be increased.

Fom the Bay District Surgical Laboratory and the Department of Surgery, University of California at Los Angeles.

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They carried out the procedure by passing a punch-like instrument through the left ventricle to engage the valve ring. Three of the four patients died in the early postoperative period, but one survived for about four and one-half years and was thought to be improved.

In 1923 Allen and Graham[1] carried out extensive investigation on laboratory animals, using a cardioscope which they passed through the left auricular appendage to visualize the interior of the heart. They had no difficulty in dividing the mitral valve in dogs, but their attempts to apply this technique to a patient with mitral stenosis resulted in death at the time of operation. The preoperative condition of this patient, however, had made surgical intervention extremely hazardous.

During the years subsequent to 1929 several isolated attempts were made to deal directly with the mitral valve. The method most used was to incise the valve ring directly as Cutler and co-workers had done. Souttar,[19] however, carried out digital dilatation with success in one case.

After these attempts interest was directed toward the development of a method for the production of mitral stenosis in experimental animals so that the operation might be advanced from a more fundamental and physiologic point of view. Powers[16] in 1929 reported a method for the production of mitral stenosis in dogs by cauterizing the valvular cusps with diathermy and injecting cultures of streptococci into the blood stream. About the same time, Wilson[22] devised another method of producing stenosis experimentally. He placed strips of pericardium across the left auricle immediately above the mitral valve so that the valve cusps would strike the bands constantly, thus becoming traumatized. The trauma produced fibrosis, which resulted in some degree of stenosis. Neither of these methods has been considered satisfactory.

Almost no work was carried out on the correction of valvular stenosis until after World War II. The revolutionary work in the surgical treatment of some of the congenital cardiovascular deformities stimulated developments in the problem of acquired valvular stenosis. Several workers, including Smithy and Parker,[17] Bailey,[2] and Harken[10, 11] investigated this problem both in the laboratory and in the operating room. In 1947 Smithy[18] recorded the results of investigation on experimental animals and also reported the outcome of valvulotomy on a series of patients. He felt, as others had previously, that valvular insufficiency was better tolerated than a stenotic lesion. Using an instrument similar to Cutler's, which he passed through the left ventricle, he punched out a circular portion of the posterior valve leaflet. He operated upon seven patients, two of whom died in the immediate postoperative period. The valve was missed in two of the remaining five. Harken initially approached the valve through the left superior pulmonary vein but subsequently employed an instrument which he passed through the left auricular appendage. Bailey initially dilated the valve with his finger but, after one such operation, incised the valve commissure with a hooked knife concealed beneath a second glove along his finger. This procedure, which removed no tissue from the valve ring, he termed "commissurotomy." The operations developed by Harken and Bailey constituted the first attempts to relieve stenosis without producing valvular insufficiency. Bailey has now operated on a large series of patients with his method. The over-all mortality rate is under 10 per cent. The patients who lived were considerably benefited.

While these valvular operations were being developed, several indirect approaches to the problem were attempted. Many physicians had noted that patients who had Lutembacher's syndrome of congenital interauricular septal defect associated with mitral stenosis had less severe clinical symptoms than patients who had mitral stenosis without the associated deformity. In an attempt to reproduce this compensatory effect, Harken created an interauricular defect in two patients with mitral stenosis. Another approach which Harken used was to interrupt the sympathetic accelerator and afferent cardiac nerves to control heart action. He used this method on several patients with severe symptoms and with rapid heart action which could not be controlled by medical measures. Still another approach, which Bland and Sweet devised[4, 20] was to shunt a portion of the pulmonary venous return back into the systemic venous system. This they accomplished by anastomosing the distal end of a branch of one of the pulmonary veins to the proximal end of the azygos vein. They used this procedure on six patients. The first three were improved. Two (at the time of report) had been operated upon too recently for satisfactory evaluation. One died after an exacerbation of acute rheumatic fever in the immediate postoperative period.

In comparing the results of all attempted treatments, the author concluded that the procedure which Bailey employs appears to offer the greatest long term benefit and has selected commissurotomy, therefore, as a routine procedure.

OPERATIVE PROCEDURE

The method used by the author follows the principles of the procedure devised by Bailey but employs a different instrument (Figure 1). This instrument has a hook on either side so that the median commissure can be divided without pronating the hand. Moreover, it is curved transversely as well as longitudinally to fit the contour of the transverse curve of the finger, a feature which obviates the need for the second glove, which is used to attach the Bailey knife to the index finger.

A maintenance dose of digitalis and doses of quinidine up to about 0.4 gm. every three to four hours are administered before operation. Penicillin, 100,000 units every six hours, is usually given three days prior to operation. Preanesthesia medication of scopolamine and morphine and an anesthetic, usually sodium pentothal and endotracheal ether, are administered.

An anterolateral incision is made through the fourth interspace. It is occasionally necessary to divide the fourth costal cartilage at its junction with the sternum. In order to gain proper exposure, the incision should be carried well into the axilla. This can be facilitated by elevating the left side of the chest and flexing the elbow in order to expose the axillary region. About 10 cc. of 4 per cent procaine solution is instilled into the pericardial cavity and allowed to remain for about four to five minutes before the pericardium is entered. A long, curved incision is then made in the pericardium in such a manner that a flap is formed, the base of which is anterior and parallel to the phrenic nerve. A purse-string suture of No. 00 silk on an atraumatic needle is placed about the auricular appendage at its junction with the chamber of the auricle. The auricle is occluded temporarily by a non-crushing clamp placed at its base, and the tip of the appendage is excised. The finger is introduced into the auricle, the clamp is removed, and the valve is palpated.

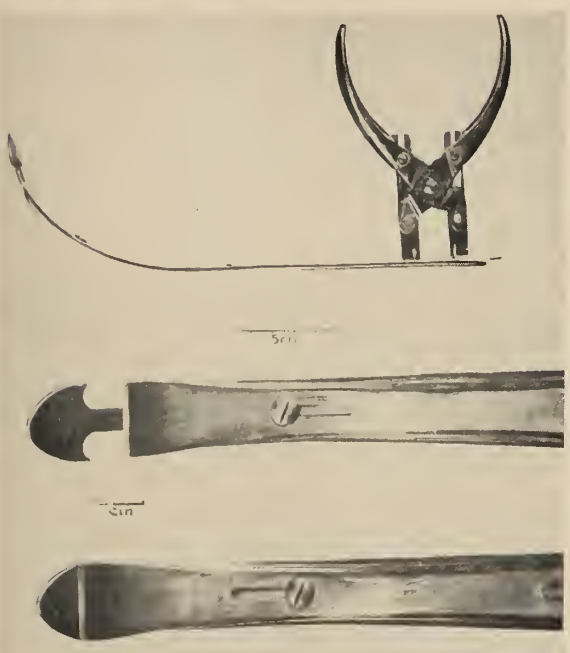

Figure 1.—Photographs of valvulotome used for mitral commissurotomy. *Top*—Lateral over-all view of valvulotome. *Center*—Open end of valvulotome with hooked knife on both sides. *Lower*—Closed valvulotome.

Occasionally an extremely stenosed valve orifice is difficult to find. A jet of blood, which sometimes may be felt passing into the auricle with each systole, is helpful in locating the valve. (Calcification of the valve was present in a high percentage of the cases.) The finger is passed into the valve opening, which is then moderately dilated. If one of the commissures tears easily, an attempt is made to continue this tear. The valvulotome is then passed into the auricle along the finger (Figures 2 and 3). The anterolateral commissure is usually divided first (Figure 4). If the opening is still too small, the median commissure is divided. The incised areas are then slightly dilated with the finger. The finger

Figure 2.—Photograph of valvulotome in position to divide the anterolateral commissure in an autopsy specimen of a heart with mitral stenosis. Most of the auricular wall has been cut away.

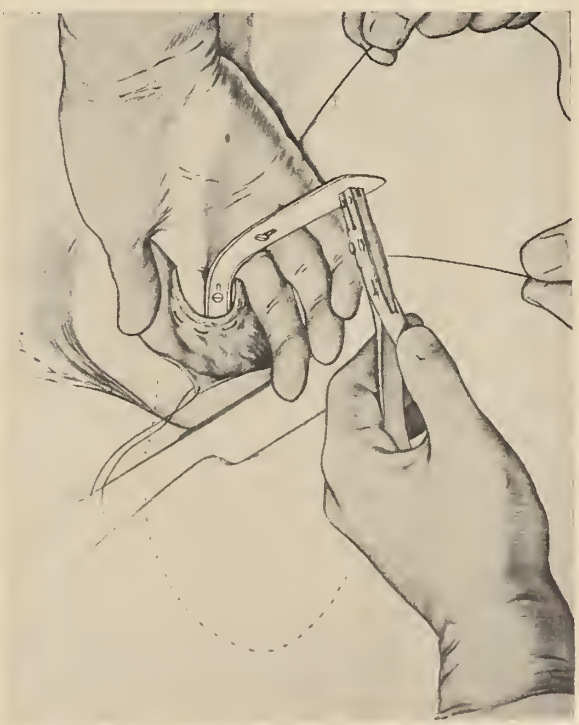

Figure 3.—Drawing of right index finger and valvulotome inserted into the left auricle through the left auricular appendage. The ends of a purse-string suture encircling the appendage are held by an assistant.

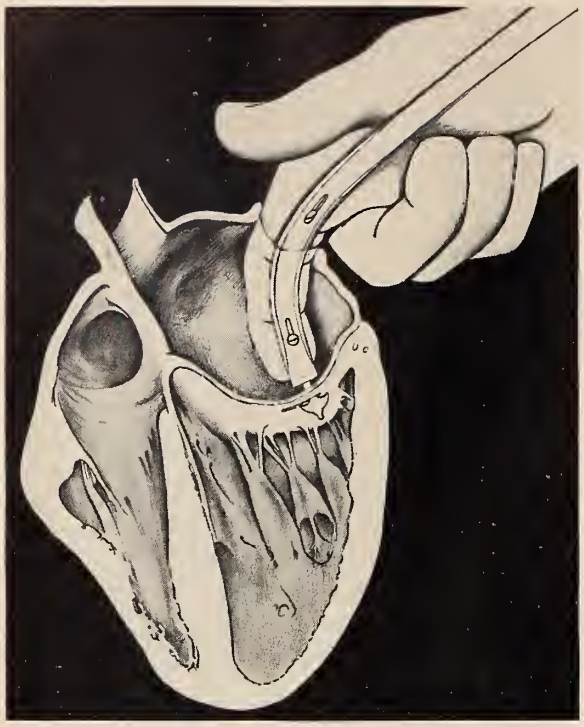

Figure 4.—Sectional view of the heart with the anterolateral commissure engaged in the open end of the valvulotome. The posteromedial commissure may be divided by moving the valvulotome to the opposite side of the valve orifice.

is withdrawn, and the purse-string suture is tied. The cut end of the auricle in most instances is oversewn with an arterial suture. The pericardium is closed loosely so that any accumulated fluid can drain into the pleural cavity. The chest is closed in layers with interrupted silk sutures, and intrapleural catheter drainage is placed.

PRESENTATION OF CASE MATERIAL

The majority of the 25 patients in the series here reported upon were in the older age group. Fourteen were over the age of 35; the oldest was 51. Four of the patients died. One of them, who at first appeared to be much improved, died three weeks after operation of a pulmonary embolus, observed at autopsy. Another died of cardiac arrest after moderate hemorrhage due to a tear in the wall of the auricle. The bleeding was controlled, but cardiac contractions could not be reinitiated. This patient was 42 years of age and had both aortic and mitral valvular lesions. The third patient, a 38-year-old male, died on the fourth postoperative day from rapidly progressive heart failure. He had had long-standing heart disease and constant heart failure with associated liver congestion, which had caused slight jaundice for some time. There were also infiltrating lesions in both lungs, the cause of which was undetermined. Valvulotomy was carried out as a last resort. Although the patient withstood the procedure well, auricular fibrillation with a high pulse rate and high pulse deficit began soon after operation, and he died on the fourth postoperative day. In the fourth case in which death occurred, cardiac arrest developed before the incision was made. The heart was immediately exposed, and cardiac contractions were reinitiated by the administration of epinephrine and cardiac massage. The anterolateral commissure was quickly divided, but the patient did not respond properly and died 18 hours after operation.

All the patients in the series had had symptoms of rheumatic heart disease for from six months to 20 years. Many of them had far advanced symptoms of pulmonary hypertension with pulmonary edema and hemoptysis. Five had auricular fibrillation before operation. Six had had peripheral emboli, and two of them had residual hemiplegia.

Of the 21 patients who survived the operation, all appear to be improved to some degree. Congestive failure occurred during the first two weeks in six cases. In three it was precipitated by a respiratory infection. Increasing the dose of digitalis and administering mercurial diuretics relieved the cardiac decompensation except in one case, previously mentioned, in which the patient died. Pulmonary edema and hemoptysis have not recurred in the surviving patients. Exertional dyspnea has diminished and exercise tolerance has increased in most cases. It is still too early to make the prognosis for the final outcome, but it would appear to be favorable.

DISCUSSION

Although patients treated by commissurotomy have been observed a relatively short time, the procedure appears to offer immense benefit to a large group of patients. The fears voiced by many during the developmental stages of commissurotomy that the incised areas would heal together now seem unfounded. Although valves which have been divided several years previously must be examined in order to determine whether stenosis recurs, the indications thus far are encouraging. The author noted no evidence of healing in the patient who died three weeks after operation, and Bailey noted no sign of reformation of the stenosis in a patient who died three months after operation. The fact that little or no additional regurgitation is produced by division of the commissures places this operation far ahead of any procedure previously devised to relieve mitral stenosis. The author and his associates have not always been able to divide the valve so that no addinal regurgitation occurs. Although great care was taken in placing the incision in the commissures, the regurgitation has increased in over 50 per cent of patients. The regurgitation can be felt by the finger in the auricle at the time of operation and can also be elicited as a systolic murmur after the procedure.

Another consideration is the possibility of occurrence of embolic phenomena after the operation. A pulmonary embolus was the cause of death of the first patient of the series, as was noted previously, and embolus was suspected in two other cases, although the presence of the lesion could not be confirmed. The author has been reluctant to employ anticoagulants because of the possibility of their causing hemorrhage.

Heart failure, either at the time of operation or in the postoperative period, is more likely to occur if auricular fibrillation is present. In an attempt to alleviate this complication, patients who are to undergo the operative procedure are given a maintenance dose of digitalis and as much as 0.4 gm. of quinidine every three hours. If auricular fibrillation exists before operation, even though it may have been present for many years, an attempt is made to convert the rhythm to normal.

Four per cent procaine solution is used in the pericardial cavity at the time of operation to prevent arrhythmias, and procaine amide is used if necessary to restore normal rhythm should any irregularity appear during the operative procedure.

Criteria for the selection of patients to undergo operation for mitral stenosis have thus far been poorly defined. Young patients with minimal symptoms only of increasing exertional dyspnea and easy fatigability tolerate the procedure the best and logically can expect the best prognosis. However, at present it is felt that older patients with advanced symptoms of pulmonary hypertension such as pulmonary edema and hemoptysis are considerably benefited by the operation. As was pointed out previously, more than half the patients in this series were over 35 and most of them improved after commissurotomy. Aortic insufficiency was not considered as contraindicative to operation unless peripheral signs were present. Several of the patients had what was thought to be mild to moderate aortic insufficiency. This diagnosis must be made with caution in the absence of peripheral signs, because a murmur characteristic of this deformity may easily be confused with a Graham-Steell murmur.

Obvious contraindications for operation are active rheumatic carditis, recent large emboli, predominant mitral insufficiency, and subacute bacterial endocarditis.

Although considerable time must elapse before the ultimate long term results of this procedure can be determined, results thus far are favorable enough to encourage its continued use in patients with mitral stenosis who have advanced pulmonary hypertension.

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Diphtheria: The Present-Day Problem

HENRY BRAINERD, M.D., and HENRY B. BRUYN, M.D., *San Francisco*

SUMMARY

The importance of diphtheria today is made evident not only by the continued frequency of its occurrence but also by its tendency to attack the older adult population. The high mortality and complication rate can be attributed in part to this shift in age incidence, as well as to delayed recognition and treatment.

THE consideration of diphtheria as a problem in this age of preventive medicine and chemotherapy may seem at first to be unusual. However, this disease not only continues to occur with significant frequency but has become more common in recent years, most particularly in the older age groups where the mortality and complications are increasingly important. The concept that diphtheria is a disease of younger children was well established in the early part of the twentieth century, when over 80 per cent of the cases occurred in children under five years of age.[5] Even as recently as 1947, it was said that about one-half the cases of diphtheria occur in children under the age of five years.[7]

A shift in the incidence of the disease toward the older age groups was stressed by Geiger in 1945.[4] This study showed an increasing mortality rate per 100 cases based upon experience with the disease in San Francisco. The increasing incidence of the disease in the older age groups has also been noted in many other cities in the United States.[6]

The present study was undertaken to determine the recent epidemiological phenomena of diphtheria in San Francisco and to analyze the cases from a clinical viewpoint in an effort to demonstrate some of the factors influencing the recognition and course of the disease in the individual patient.

MATERIALS AND METHODS

The present investigation covers the nine-year period from January 1942 through December 1950. Statistical material on reported cases of diphtheria in the state of California and in San Francisco county over that period was made available by the State of California Department of Public Health, Bureau of Communicable Disease Control, I. M. Stevens, morbidity statistician.

The patients included in the investigation were all hospitalized in the isolation division of the San Francisco Hospital during the years 1942 to 1950, inclusive. The criteria for inclusion required that the clinical diagnosis of diphtheria had been confirmed either by the isolation of Corynebacterium diphtheriae or, in a few instances, by the occurrence of neurological complication ascribable to the toxin of this organism. The postmortem observation of pathological changes typical of the acute disease process in the respiratory tract was also considered adequate evidence. These criteria account for a great part of the discrepancy between the number of cases reported for the county of San Francisco and the number presented in this study. For example, diphtheria might have been diagnosed on clinical grounds, diphtheria antitoxin used in treatment, and the case reported to the Department of Public Health as a case of diphtheria; yet if all cultures were subsequently reported negative for Corynebacterium diphtheriae, the case would be excluded from this study.

All culture material was immediately inoculated onto Loeffler medium and placed in a bacteriological incubator. Interpretation of the cultures was carried out in the laboratories of the department of public health of the City and County of San Francisco.

The criteria for the diagnosis of the various complications of diphtheria require special note. The presence of myocarditis was confirmed in every instance, either by electrocardiogram or postmortem examination. The criteria of electrocardiographic abnormality have been described in detail elsewhere.[3]

The diagnosis of neurological complications was based entirely on the clinical observation of sensory or motor changes in the areas served by the nerve groups involved.

Respiratory obstruction was considered, for statistical purposes, to exist in those cases in which tracheotomy was done or in which atelectasis was noted either clinically or postmortem. Minor degrees of respiratory obstruction associated with laryngeal diphtheria were classified in the present study merely as laryngeal involvement.

Antitoxin was given intravenously in almost all cases.

RESULTS

Epidemiological Observations

It will be noted in Table 1 that in the state of California as a whole the incidence of diphtheria declined in the years 1948, 1949, and 1950, while in San Francisco County it increased, and the proportion of cases in California which occurred in San Francisco County increased sharply. While not every patient with diphtheria in the county was hos-

From the Infectious Disease Laboratory of the San Francisco Hospital and the Divisions of Pediatrics and Medicine of the University of California School of Medicine, San Francisco.

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TABLE 1.—*Total Number of Cases of Diphtheria in California, in San Francisco County, and in San Francisco Hospital*

	1942	1943	1944	1945	1946	1947	1948	1949	1950
Total Cases in California	883	1,167	1,215	1,299	1,186	774	444	457	268
Total Cases in San Francisco County	29	41	20	54	53	45	92	82	48
Total Cases in San Francisco Hospital	20	22	6	28	32	44	56	43	22
Per cent of State Cases in San Francisco County	3.2	3.5	1.6	4.1	4.4	5.8	20.7	17.9	17.9

TABLE 2.—*Diphtheria Cases in California, 1942-1950, by Age Groups*

Year	0 - 14 Years		15 - 39 Years		40 Years and Older	
	Number	Per Cent of Total	Number	Per Cent of Total	Number	Per Cent of Total
1942	525	60.6%	222	25.6%	120	13.8%
1943	785	68.5	244	21.3	117	10.2
1944	830	70.0	268	22.6	88	7.4
1945	860	67.2	328	25.6	93	7.2
1946	776	67.0	288	24.9	94	8.1
1947	467	61.6	211	27.9	80	10.5
1948	209	48.0	126	29.0	100	23.0
1949	191	42.6	160	35.6	98	21.8
1950	107	40.4	87	33.0	70	26.6

Note: Only those cases in which the age was stated are included in this table.

pitalized at the San Francisco Hospital, the difference between the number of reported cases for the county and the number of patients recorded in Table 1 as having been in the San Francisco Hospital with diphtheria is accounted for, largely, by the criteria established for inclusion of cases in the present study.

Of the total of 273 patients (San Francisco Hospital, 1942-1950) included in the study 65 per cent were males and 35 per cent females. This ratio did not vary significantly when computed year by year. The mortality rate for males over the nine-year period was 20.2 per cent and for females 17.8 per cent. In the total group of 273 cases, there were only eight Negroes and three Orientals, distributed at random over the nine-year period.

Data on cases of diphtheria in California, arranged according to the age of the patient, are presented in Table 2. Only those cases in which the age was given in the report to the California State Department of Public Health are included. There was a significant increase in the incidence of diphtheria in the group of persons aged 40 years and older, and a steady decline through the nine-year period in the incidence of the disease in the youngest age group comprising children from birth to 14 years of age. In the age group 15 to 39 years there was only a slight increase over the course of the nine-year period. In a similar analysis of diphtheria cases in San Francisco County, data were included to cover a longer span of time (Table 3) and the increasing incidence of diphtheria in the older age groups was even more striking.

In the present series of 273 cases, eight patients

TABLE 3.—*Increasing Incidence of Diphtheria in Patients Over 30 Years of Age in San Francisco*

Year	Per Cent of Total Cases	Year	Per Cent of Total Cases
1922	9	1944	35
1924	8	1946	57
1926	8	1948	69
1942	52	1950	54

Data for years 1922-1926 from J. C. Geiger, M.D., Bulletin, San Francisco Department of Public Health, October 27, 1947; for years 1942-1950 from California State Department of Public Health, Bureau of Disease Control.

gave a history of having had diphtheria previously. One of them, who gave a history of diphtheria as a child, had two separate attacks of typical diphtheritic pharyngitis in the course of a year during the present study.

In the last year of the study the Schick test was performed in a number of patients on admission one hour before antitoxin was administered. The rapid local fixation of the toxin of Corynebacterium diphtheriae makes such testing possible, and the results are little influenced by the subsequent introduction of antitoxin.[8] In 13 such tests on patients included in this investigation, the result was positive in ten cases and negative in three.

An attempt was made to determine the magnitude of the burden placed upon the hospital by cases of diphtheria. The average period of hospitalization for the patients who died was fairly constant at about ten days for the nine-year period: for patients who recovered, it ranged between 25 and 48 hospital days, with a tendency in recent years to longer

hospitalization. The total hospital time for patients who recovered averaged 1,063 days per year over the nine-year period.

CLINICAL FEATURES OF DIPHTHERIA

Location of Infection

Diphtheria may involve any part of the respiratory tract, other mucous membranes, or the skin. All but one patient in this series had diphtheritic infection of the respiratory tract (Table 4). One patient had cutaneous infection as the only manifestation and nine others had skin involvement in addition to a lesion of the respiratory system. Of the 273 patients, 173 (63.4 per cent) had a diphtheritic lesion limited to one anatomical area; 100 (36.6 per cent) had lesions in more than one area. While laryngeal diphtheria was present in 75 patients, only 12 had lesions of the larynx in the absence of pharyngeal diphtheria. In 94.1 per cent of all patients, pharyngeal diphtheria was present.

Symptoms and Signs

The systemic symptoms of early diphtheria were generally mild and insidious in onset. Soreness of the throat was rarely severe at the beginning, but increased gradually to a maximum after several days and often persisted for many days. Headache, muscular aching, malaise, and prostration were not usually severe in the early stages of infection. Fever was often low-grade or absent. Chilliness was noted frequently, but frank chills were uncommon.

The local lesion in the pharynx in its typical form consisted of a grayish, tenacious pseudomembrane, confluent over areas involved, and often extending beyond the tonsillar fossa to the posterior pharyngeal wall. Extension to the soft palate and uvula was frequently observed. Early pseudomembranes appeared translucent and merged almost imperceptibly into the surrounding mucous membrane. Later lesions appeared denser and became more sharply demarcated. Edema of the tissues was often prominent. Erythema was commonly limited to a narrow area around the pseudomembrane. Atypical lesions were common and included follicular or patchy pseudomembranes, pseudomembranes variously colored from greenish to black, complete absence of pseudomembrane, and diffuse erythema of mucous membranes.

The manifestations of laryngeal diphtheria were similar to those of other forms of laryngitis. Croupy cough, hoarseness, stridor, and obstructive dyspnea were usually present. Complete aphonia was common. When laryngeal diphtheria was suspected and there was no pharyngeal involvement, visualization of the larynx was carried out to confirm the diagnosis.

Anterior nasal diphtheria was characterized by persistent nasal discharge, often blood-tinged and frequently unilateral. Pseudomembrane was usually visible after removal of secretions.

Cutaneous diphtheria was observed as an ulcerative lesion which did not necessarily have pathognomonic features. Early lesions often consisted of flat bullae partly filled with pus, surrounded by an area of erythema. Late ulcers were only occasionally covered by pseudomembrane and were clinically indistinguishable from other indolent ulcers. Anesthesia of the base of the ulcer occurred in several patients. This symptom was of great diagnostic aid.

Complications

Myocarditis, obstruction of the respiratory tract, and neuritis were the most commonly noted complications of diphtheria (Table 5). Myocarditis and neuritis occurred more frequently in the older age groups, while respiratory obstruction was more common in children. In addition, pneumonia occurred in five patients, nephritis in five, embolism of the femoral artery in one, and general hemorrhagic tendency in one.

Myocarditis occurred in 100 patients (36.6 per cent). The average time of appearance after the onset of infection was 9.8 days; the range was from two to 47 days. It appeared on the average earlier (7.2 days) in patients who died than in those who recovered (11.4 days). In many instances of myocarditis of mild degree, electrocardiographic abnormalities were the only manifestation. In more severe cases anginal pain, abdominal pain, syncope, pallor, vomiting, hypotension, arrhythmia of many varieties, deterioration in quality of the apical first heart sound, gallop rhythm, and murmur were noted. Abnormalities as observed electrocardiographically often lasted weeks or months but appeared to be permanent in only one patient. Of 100 patients in whom myocarditis was diagnosed, 36 died.

Severe obstruction of the respiratory tract occurred only in patients who had involvement of the larynx, sometimes in association with diphtheria of the trachea and bronchi. Of 40 patients with severe degrees of obstruction, 26 (65 per cent) died. Atelectasis and pneumonia were also considered to be of obstructive origin.

Neuritis was diagnosed in 44 patients, of whom six (13.6 per cent) died (Table 6). In 16 patients,

TABLE 4.—*Mortality Rates Related to Location of Diphtheritic Lesion*

Location	Total Cases	Deaths	Per Cent Mortality	
N	2	0	0.0	Single Location 5.7
P	158	8	5.0	
L	12	2	16.7	
C	1	0	0.0	
NP	29	5	17.2	Multiple Location 42.0
PL	43	23	53.5	
LT	1	1	100.0	
PC	7	1	14.3	
NPL	13	6	46.2	
PLT	2	2	100.0	
NPC	1	0	0.0	
NPLT	3	3	100.0	
NPLC	1	1	100.0	
	273	52	19.1	

Legend: N—Nasal
P—Pharyngeal
L—Laryngeal
C—Cutaneous
T—Tracheobronchial

TABLE 5.—*Incidence of Complications and Deaths Due to Diphtheria According to Age*

Age Group	Number of Patients	Patients with Complications	Total Complications	Patients with Myocarditis	Patients with Obstruction	Patients with Neuritis	Patients with other Complications	Deaths
0 - 14 Years	85 (31.1%)	36 (42.4%)	44	20 (23.5%)	20 (23.5%)	2 (2.4%)	2 (2.4%)	15 (17.5%)
15 - 39 Years	65 (23.8%)	28 (43.1%)	35	20 (30.8%)	5 (7.7%)	8 (9.6%)	2 (3.0%)	5 (7.7%)
40+ Years	123 (54.9%)	77 (62.6%)	116	60 (48.8%)	17 (13.8%)	33 (26.8%)	6 (7.2%)	33 (26.8%)
All Ages	273 (100.0%)	141 (51.6%)	195	100 (36.6%)	42 (15.8%)	43 (15.8%)	10 (3.7%)	53 (19.4%)

Percentages indicate incidence in age group.

cranial nerves as well as nerves of the extremities were involved. Twelve patients had neuritis only in the extremities. Four had glossopharyngeal neuritis only, and in two patients the vagus alone was involved. In ten patients who did not have neuritis of the extremities, the ninth and tenth cranial nerves were both involved. Of the six patients with neuritis who died, four had involvement of the vagus nerve. Intercostal and diaphragmatic paralysis was present in the other two. In cases in which glossopharyngeal paralysis occurred, a nasal quality to the voice and regurgitation of fluids through the nose often preceded visible diminution of palatal movement. Vagal involvement was manifested by dysphagia, accumulation of secretions, and aphonia. Neuritis of the extremities was often heralded by paresthesias and numbness, followed by diminution of deep reflexes and loss of motor power in a symmetrical fashion. An increase in the spinal fluid protein content, without pleocytosis, was common. Recovery from postdiphtheritic neuritis was often very slow but was always complete.

Glomerulonephritis was diagnosed in five patients, four of whom died. In the patient who lived, chronic glomerulonephritis with hypertension persisted. It was not certain that this lesion was diphtheritic in origin. Embolism of the femoral artery was observed in one patient and was presumed to result from a mural thrombus complicating diphtheritic myocarditis.

Treatment and Results

With rare exceptions diphtheria antitoxin was administered within a few hours after the patient was admitted to the hospital. Skin and conjunctival tests for sensitivity to horse serum were invariably performed. Antitoxin was administered intravenously, usually diluted in an infusion of 5 per cent glucose solution or normal saline solution, to all but a few patients. Those patients who had positive reaction to sensitivity tests received all or part of the antitoxin intramuscularly. Intramuscular injection was also used in a few cases in which the disease was mild and in an early stage. The dose of antitoxin ranged from 10,000 to 100,000 units; the most frequently used was 40,000 units. The size of dose depended upon the location of the lesion, whether one or more anatomical areas were involved, and the duration of the disease. The weight of the patient was given little consideration in determining the amount, and the entire dose of antitoxin was given at one time. Serum reactions occurred in 28 patients (10.5 per cent). They occurred as early as the day of treatment and as late as the 26th day after treatment; the average was 8.8 days after antitoxin was administered. Reaction was not fatal in any case.

In the latter years of the period covered by this study, most patients received penicillin intramuscularly for one week or more. In no instance did penicillin appear to affect the course of the diphtheria or the incidence of complications. As was previously reported,[2] however, there was earlier disappearance of Corynebacterium diphtheriae from the respiratory tract in those cases in which penicillin was given.

Tracheotomy for the relief of respiratory obstruction was done in 22 cases. Ten of the patients died. Suction frequently was used for relief of obstruction, and oxygen was administered when it was deemed necessary. Myocarditis was treated by complete rest, and, if associated with clinical manifestations, by oxygen and sedation. Hypertonic glucose solutions appeared to have little effect. Patients with severe hypotension were given ephedrine and infusions of plasma. Digitalis was used only in those cases in which myocarditis was associated with auricular fibrillation or flutter with rapid ventricular rate.

All patients were maintained at bed rest for three weeks or until electrocardiographic tracings became normal. Activity was thereafter gradually increased until the patient was able to care for himself at home.

The longer the time between the onset of illness and the administration of antitoxin, the greater the incidence of complications and the higher the mortality rate (Table 7). In the cases in which no com-

TABLE 6.—*Incidence and Time of Onset of Post-Diphtheritic Neuritis*

Nerve	Patients	Interval Between Onset of Diphtheria and Onset of Neuritis — Average (in days)	Range (in days)
Extremities	28	48.0	21-91
Ninth cranial	21	31.9	6-53
Tenth cranial	22	33.9	10-62
Other cranial	4	—	12-60

TABLE 7.—*Mortality Rate in Relation to Interval Between Onset of Disease and Injection of Antitoxin*

Day Treatment Started	No. of Cases	No. of Fatal Cases	Mortality Rate (per cent)
1	9	0	0.0
2	26	1	4.0
3	31	5	16.1
4	46	8	17.6
5	40	8	20.0
6	28	6	21.4
After 6 days	67	20	29.9

plications developed, the average duration of illness before treatment was 4.4 days. For patients who had complications and recovered, the interval between onset and injection of antitoxin averaged 5.7 days; for those who died, 6.6 days. Twenty-five per cent of patients in this series did not receive antitoxin until seven or more days after onset of disease.

In the group of cases in which diphtheria was localized to one anatomical area the mortality rate was 5.7 per cent; in the group in which lesions involved two or more areas, it was 37 per cent (Table 7). The mortality rate was highest in the oldest age group and lowest in the middle age group (Table 5). The deaths among children were largely attributable to respiratory obstruction, which was of relatively high incidence in this age group. In the cases in which the patients had obstruction and recovered, the average interval between onset of disease and injection of antitoxin was 3.4 days; in the cases in which patients died of obstruction it was 6.8 days.

DISCUSSION

It is evident from the data presented that the incidence of diphtheria, while it has decreased in recent years in the state as a whole, is still significant and warrants the continued attention of physicians.

Although the data in this report indicate that in recent years an increasing proportion of the total number of cases in the state occurred in San Francisco County, this may be in some measure misleading. While the reported relative increase in San Francisco cannot be ascribed to shifts in concentration of population (for the population of San Francisco grew considerably less rapidly in the last ten years than did that of the state as a whole), it is conceivable that there was greater frequency of recognition of diphtheria in San Francisco than elsewhere in the state, rather than concentration of occurrence of the disease there.

The traditional statement that diphtheria has no predilection for persons of any one race[5] is not borne out in the present study. The number of cases of the disease in Negro and Oriental patients was low in relation to the proportion of persons of those races in the total population of the county. Of the patients in the present series, 2.9 per cent were Negroes and 1.1 per cent were Chinese, whereas almost 7 per cent of the residents of the county are Negroes and about 2.5 per cent are Chinese. Likewise, the larger proportion of males with the disease seems of interest and is not readily explained. The relative increase in incidence in adults, and especially in adults over 40 years of age, seems most important. The explanation for this probably is that in the widespread immunization programs, the younger persons are protected while the older persons are not. Most adults have not been artificially immunized, and it is probable that development of natural immunity has decreased in recent years because of less exposure to the organism. In Schick-testing of elderly adults a high rate of susceptibility was noted.[1] The administration of toxoids to adults entails increased risk of serious reaction, unless special techniques and precautions are used.[1] The increased incidence of complications in the older age groups may explain the increase in average length of hospital stay observed in the present study. The higher mortality rate from the disease in older persons puts further stress on the importance of the relative increase in incidence in the higher age groups.

The present investigation demonstrated that clinical infection with Corynebacterium diphtheriae is not necessarily a good stimulus to the production of active immunity and that recurrence is possible. This would seem to indicate Schick testing for convalescent patients and the giving of toxoid if there is positive reaction to the test.

It is apparent that the prolonged stay in the hospital requisite for patients with diphtheria represents a real burden on the hospital facilities of a community. More widespread utilization of the relatively simple means of prevention of the disease would offer an answer to this purely socio-economic feature of diphtheria.

The outcome of diphtheritic infection depends primarily on the amount of toxin fixed in the tissues. This, in turn, depends on the location of the lesion, extent of involvement, duration of infection before antitoxin is given, and resistance of the patient. Since diphtheria toxin is fixed in the tissues so rapidly and firmly that only a small part can be neutralized by antitoxin, it is vital that unfixed toxin be neutralized at the earliest possible moment by the introduction of antitoxin. This necessitates early diagnosis and treatment based on suspicion. Since diphtheria involves the pharynx in 95 per cent of patients, recognition of the lesion in this readily visible area will permit presumptive diagnosis in almost all cases. Because the incidence of fatalities and complications rises sharply with each day of delay, antitoxin must be administered at once in all cases in which diphtheria cannot be excluded by careful examination of the upper respiratory tract. Bacteriological diagnosis before treatment is a luxury that carries with it the risk of fatal delay, although confirmation of the diagnosis by culture must be sought in all cases.

Atypical features of the disease are common and must be kept constantly in mind. Although laryngeal diphtheria is usually associated with pharyn-

geal diphtheria, laryngoscopy should be carried out in all cases of laryngitis in which diphtheria cannot readily be excluded. Nasal and cutaneous diphtheria may persist for weeks or months. Absorption of toxin is relatively slight in such cases but may result eventually in myocarditis or neuritis. Cultures should be made in all cases in which persistent nasal discharge or indolent skin ulcers are present, and treatment should be started as soon as possible if Corynebacterium diphtheriae is present.

Complications are the cause of death from diphtheria. Myocarditis and respiratory obstruction commonly coexist, and death results from their additive effect. The earlier the appearance of myocarditis, the greater the probability the patient will die. Neuritis of the tenth cranial nerve may cause atelectasis and pneumonia due to aspiration of secretions, and these complications must be dealt with by frequent suction of the respiratory tract and lowering of the patient's head. Often it is necessary to feed the patient by tube or intravenously. If there is paralysis of the muscles of respiration, a mechanical respirator must be used.

Diphtheria antitoxin is the single important agent in the treatment of this disease. Because of the necessity for immediate neutralization of circulating toxin, the intravenous route appears to be the one of choice in most instances. Exact dosage requirements cannot be stated. They vary between 20,000 and 100,000 units, depending upon the site, the extent and the duration of infection. The entire amount should be given at one time. Under-dosage and repeated small doses are to be condemned. Serious serum reactions are rare, although serum sickness constitutes an annoying problem.

Penicillin therapy, in conjunction with antitoxin, contributes little to the successful outcome of a case of diphtheria.[2] Furthermore, the administration of penicillin in no way modifies the requirement for antitoxin.

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Treatment of Closed Head Injuries

LESTER B. LAWRENCE, *Oakland*

SUMMARY

Cerebral concussion is a physiological disturbance in the brain that follows a blow on the head. The cardinal symptom is a disturbance in consciousness varying from a complete loss of consciousness to a dazed state. The phenomenon is self-limited and completely reversible.

In cerebral contusion there is actual injury to the brain. The symptoms that result vary according to the amount and location of the damage. A very small amount of damage in certain areas of the brain may be fatal, while extensive damage in other areas will be survived.

Even when a patient is unconscious after a head injury, certain simple neurologic tests can be done to determine with some accuracy the extent and location of brain damage. When the patient regains consciousness, further bedside tests can be carried out to increase the accuracy of diagnosis.

Careful observation of the patient at frequent intervals is necessary to judicious application of appropriate treatment. The physician must be on the alert constantly for signs of intracranial hemorrhage and should be ready to intervene surgically if necessary.

In most cases of injury to the head, treatment consists of supplying to the patient elements that are necessary to maintain physiologic conditions and of combating disorders arising from specific injuries to the brain.

FORTUNATELY, in the care of patients who have so-called closed head injuries—the term is applied to any injury of the head in which there is neither penetrating wound of the skull nor compound or depressed fracture—surgical intervention is seldom required, although it should always be anticipated.

The most common of injuries to the head is cerebral concussion. This condition is simply a disturbance in the normal state of the brain caused by a blow on the head that is not severe enough to cause structural damage in the brain. The disturbance is self-limited and the patient needs no more than supportive measures. In this state, there is always some disturbance in consciousness that may vary from total unconsciousness lasting from minutes to several hours, to a transient clouding of the sensorium frequently termed a "dazed" or "punchy" state. Frequently the condition is associated with more or less shock.

A more serious but less frequent kind of head injury may be classified as brain contusion. Injury of this kind may or may not be associated with fractures of the vault or base of the skull. The outcome, barring certain complications, depends largely upon the amount and location of actual damage to the brain. A relatively small hemorrhage in the pons, for instance, may cause death quickly, while a very extensive contusion of a cerebral hemisphere may be followed by recovery.

The cardinal factors of interest to the physician are the kind and extent of the injury, and the proper treatment.

Proper clinical evaluation of the condition of the patient is of utmost importance in order to determine the kind and extent of brain injury, and for this there are several simple guides.

First, it is important to know how the patient was injured. If the injury occurred as the result of a blow to the head while the head was stationary—as might happen if the patient were struck by a blackjack or a baseball—the damage to the brain is likely to be fairly well localized to the zone of impact. On the other hand, if the head was moving rapidly and struck a solid object, extensive and diffuse brain damage is more probable.

The state of consciousness following an injury is extremely important to evaluate. Since it has been shown that a persistent loss of consciousness is due to minute lesions in the hypothalamus located near the center of the brain, it is apparent that deep and prolonged stupor is indicative of severe and extensive brain injury. In most instances, the loss of consciousness occurs at the time of injury and persists for varying periods afterward. Concussion is followed by loss of consciousness that may be very transient and followed by a period of confusion and disorientation persisting for several hours. If stupor has not begun to diminish two or three hours after injury, it is probable that cerebral concussion has been complicated by actual brain contusion. Each day that stupor or coma continues decreases the chance of recovery, although patients have survived even after as long as three months of unconsciousness. The disturbance in sensorium is frequently accompanied by amnesia which may persist for several days after the return to consciousness. Retrograde amnesia also is a frequent phenomenon; the patient may have no recollection of things that happened several hours before injury.

In some instances there may be a period of lucidity following a blow on the head which may or may not have caused immediate loss of consciousness, and then a lapse into deepening stupor. In an adult this usually indicates intracranial hemorrhage and is very serious. The phenomenon is much more com-

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mon in children, and generally a less serious sign, although here, too, bleeding must be suspected. If bleeding occurs the patient's condition will deteriorate and neurologic symptoms referable to the area affected by it will develop. Bleeding must be controlled promptly by surgical means. If stupor following an interval of lucidity is due to localized or generalized post-concussion cerebral edema, localizing signs are not prominent, the stupor is not deep and the patient's condition begins to improve in a relatively short time.

The temperature, pulse rate, respiration rate and blood pressure, in themselves, are generally unreliable as indices of the condition of the patient. This is particularly true of children, who may have a very rapid pulse and respiratory rate in the presence of increasing stupor and progressively prominent localizing neurologic signs. An adult patient with increasing intracranial pressure will have a slowing of the pulse and of the respiratory rate while the pulse pressure tends to increase, and at the same time there will be increasing headache, nausea, vomiting and progressively deepening stupor. If there is rapidly increasing temperature in the presence of other evidences of a severe head injury, the prognosis is generally very poor. In general it is a fallacy to judge the condition of the patient on the basis of the pulse rate, respiration rate and blood pressure alone.

In conjunction with the observation of the general signs already noted, it is important to consider the presence of localized brain damage. A limited neurologic examination of an unconscious patient can be done in a very few minutes. The head should be palpated carefully and x-ray films taken if necessary to determine whether or not depressed skull fracture is present. Frequently, the skull can be seen or palpated through a scalp laceration. If a depressed skull fracture is present, special attention is, of course, necessary. The pupils of the eyes must be examined and the reaction to light observed. If one pupil is static, ipsilateral brain compression or contusion must be suspected. If both pupils are dilated and do not respond to light, it is probable that there is bilateral and extensive brain damage, and the prognosis is generally very poor. Although the extraocular muscle function cannot always be determined with accuracy, a fair appraisal can be made by careful observation of the roving motions of the eyes in all directions. If the third, fourth or sixth cranial nerve has been damaged on either side, the limitation of motion of the eyeball is evident. If there is a fixed conjugate deviation of the eyes to one side, localized cortical damage must be suspected. Examination of the ear canals should be carried out. Bleeding through a ruptured ear drum is indicative of basal skull fracture in the middle fossa. If there is discharge of blood from the nose, the source of bleeding should be determined, if possible, since nasal hemorrhage without evidence of injury to the nose usually occurs as a result of a basal fracture through the floor of the anterior fossa of the skull.

Facial asymmetry, if present, is usually evident as an unconscious patient becomes restless. If the stupor is deep, firm supraorbital pressure is frequently a stimulus painful enough to cause the patient to move the muscles of expression on one or both sides of the face. Supraorbital pressure is also a useful test in determining the relative depth of the stupor. Subarachnoid hemorrhage may occur without causing any indication of meningeal irritation for a number of hours after an injury has occurred. However, in almost all such cases there will be some stiffness of the neck after 12 hours. Also there may be positive reaction to Kernig's test, but in general this test is a little less reliable than a determination of the stiffness of the neck.

A few minutes of observation of a patient who is restless will serve to determine whether or not both sides of the body are being used with equal frequency and equal force. If motions on one side are less frequent, one must suspect local brain contusion and be alert to detect progressive paralysis of the side that is used least frequently. The withdrawal response to painful stimuli, such as plantar stimulation or deep pressure over the nail bed, also helps in determining the relative strength on the two sides. The tone of the extremities should also be noted to determine if there is any difference in tone on the two sides of the body. It is just as important to observe differences in flaccidity between one side and the other as it is to note greater rigidity. The deep and superficial reflexes should be evaluated carefully and the activity on one side compared with that on the other. Ankle clonus can be easily tested and the sole of the foot should be stroked to determine whether or not Babinski reflexes are present. Usually by carrying out these simple tests, it is possible to determine whether or not any brain damage has occurred and, if so, whether the damage is bilateral or unilateral. At times, one can go a step further and determine whether or not the damage is chiefly in the anterior, the central or the posterior area of the cerebral hemisphere.

If the patient is conscious, a more thorough neurological examination can be done. The various special senses can be tested, including the visual fields. This can be done easily with a so-called confrontation test. The test is carried out in a very few minutes by checking one eye at a time and having the patient fix his gaze on the examiner's forehead or nose. The examiner can then bring either his finger or some other small, easily seen object in from the periphery of the four quadrants of the visual fields. By this test the size, shape and location of visual defect can be determined. When the extraocular muscle functions are examined, the patient should be instructed to keep his gaze fixed on the examiner's finger, which then is moved from side to side and up and down. The failure of either eye to follow is readily apparent and at the same time the presence of nystagmus can also be observed. The corneal reflexes are simply tested by a sharp, short puff of breath directed against each cornea.

Forced and emotional movements of the face should be observed for symmetry and each side of the face should be tested for sensory acuity. The response to pin-prick will generally indicate areas of sensory impairment.

Hearing, of course, can be easily tested, preferably with a tuning fork. It is important to examine hearing as early as possible after the injury, for several reasons. Occasionally, a person with a basal fracture of the skull will have loss of hearing without bleeding from the affected ear canal simply because the ear drum has not ruptured and the blood accumulates in the middle ear. (Also, in industrial and liability cases, hearing sometimes suddenly disappears in one ear shortly after legal proceedings are instituted.) The mouth and throat should be inspected and any asymmetry in the tongue or palate noted.

Careful appraisal of the patient's speech is important. Even though the patient may be confused and irrational, various types of aphasia may be detected. Sometimes complete motor aphasia or nominal aphasia is falsely attributed to some degree of stupor or to psychic disturbance. A simple test for nominal aphasia is to ask the patient to identify a watch, a fountain pen or a box of matches.

A test of the sensory facilities should be done as soon as possible after the patient regains consciousness. Total anesthesia of one or more extremities does not occur as the result of brain damage. Frequently, however, there may be loss of one or more of the special types of sensation. For example, the stereognostic sense may be completely lost in one hand while other kinds of sensation are preserved. The stereognostic sense is tested by asking the patient to identify, without looking, a common object placed in his hand. If the stereognostic sense is disturbed, there is frequently also some disturbance in position sense. Varying degrees of disturbance in tactile sensibility, as evidenced by reaction to light touch or pin-prick on the face, trunk and extremities, may be present. The best results will be obtained from the sensory examination if the tests are done with the patient's eyes closed. Finer tests for muscle coordination should also be done with the patient's eyes closed. The finger-to-nose test and the heel-to-knee test can be easily carried out, and both are very informative.

To summarize the foregoing discussion of signs and symptoms: It may be assumed that the patient is doing well if the pulse, respirations, temperature and blood pressure are not fluctuating, if stupor is lessening and if there is no progression in the neurologic signs. On the contrary, if the stupor is deepening, the pulse, respirations and blood pressure are fluctuating and there are signs of progressive central nervous system dysfunction, the patient's condition is deteriorating and unless something can be done to change the sequence of events, the outcome probably will be fatal.

After the status of the central nervous system has been thoroughly evaluated, other associated injuries must be considered. If there is fracture of the extremities, at least emergency splinting must be done even in cases in which the head injury is severe, although whether or not to begin definitive treatment of complicated fractures depends, of course, upon the condition of the patient. The examiner ought also to attempt to determine whether or not there are any visceral injuries.

There are a few special procedures that are necessary to ascertain the condition of the patient soon after the head injury has occurred. If for any reason there is doubt regarding the presence of brain contusion, a spinal puncture should be done. The spinal fluid pressure should be measured with a manometer and the character of the fluid noted. If brain contusion has occurred, the fluid is usually blood-tinged or frankly bloody and there may be an increase in intracranial pressure. If the spinal fluid is clear and the pressure high, great care should be exercised in the withdrawal of more than a few drops of spinal fluid. In the absence of depressed fractures or penetrating wounds of the skull, the taking of x-ray films is not ordinarily necessary as an emergency procedure. In most instances, it is desirable to defer routine x-ray examination of the skull until the general condition of the patient is reasonably stable. In most instances, if a depressed fracture or a linear fracture crossing the middle meningeal channels in the temporal bone is present, it is observable in a scout film taken with a portable x-ray unit.

The use of electroencephalograms, pneumoencephalograms and angiograms is not necessary in the acute stage of head injury. Such examinations, however, are valuable in evaluating some of the post-traumatic states and late complications that occasionally occur.

TREATMENT

Treatment of acute head injury is usually started by treatment of the initial shock. Infusion of glucose solution, blood plasma and whole blood, administration of oxygen and stimulants and the application of external heat must be carried out irrespective of the head injury. After the initial phase of shock has subsided, and the type and extent of damage to the nervous system has been determined, more definitive treatment can be instituted.

One of the most troublesome symptoms is restlessness. That which is caused by cortical irritation alone is not common except in alcoholic patients, and usually there is good response to paraldehyde given by mouth or rectally. Some physicians give the drug intramuscularly and a few intravenously without apparent deleterious effects. In most instances, restlessness is due to pain and discomfort. This can be combated by adequate splinting of fractures, by comfortable positions in bed, by catheterization if the bladder is over-distended, and by giving appropriate analgesics. Codeine is probably the most helpful drug for the control of pain. Demerol® in doses not to exceed 100 mg. hypodermically, every three or four hours, may be used. Morphine, Pantopon® and Dilaudid® are not usually desirable

because of the depressing effect of these drugs on the respiratory mechanism, although they are usually tolerated well by persons with minor head injuries.

The routine use of chemotherapy and antibiotics is not justifiable. If the patient obviously has infection of the sinuses or ears and there has been a basal skull fracture with bleeding into the infected area, the necessity for antibiotics is apparent. In most cases, however, such therapy is not used prophylactically but is reserved until there is some evidence of the beginning of infectious process.

Enough fluid to maintain normal fluid balance should be given—a minimum of 1,500 cc. Usually five or ten per cent solution of glucose and water suffices. Except for cases in which there is a long period of unconsciousness, the maintenance of normal protein intake is usually not a problem. If it is apparent that the patient is going to have a very long period of stupor, a stomach tube can be used to insure adequate supplies of proteins and carbohydrates and electrolytes.

If the patient is unconscious, care must be taken to assure a free airway. The optimum position for the unconscious patient is a modified Sim's position to allow free drainage of secretions from the nose and throat. If this is not adequate, pharyngeal suction is necessary, and in some instances it is necessary to insert an intratracheal tube to facilitate aspiration of the bronchial tree. If an intratracheal tube is not practical, an intratracheal catheter can usually be inserted without difficulty in a deeply stuporous patient.

Oxygen therapy is of considerable value in all cases of serious head injury. As an emergency measure, a nasal catheter is more desirable than an oxygen mask. An oxygen tent with adequate refrigeration is usually very well tolerated after the patient has stabilized. In all cases, it is very important to humidify the oxygen adequately.

It is necessary to be continuously on the alert for rapid increases in the patient's temperature. Routinely, specific measures should be instituted before the rectal temperature reaches 104°. Ice bags on the head, axillae and groins should be used freely. Continuous administration of cooled and humidified oxygen is essential. Tepid sponges, sponges with ice water or with chilled alcohol are helpful. If the temperature is very high or is rising rapidly, so drastic a measure as sponging with ether is justified. In such an emergency, some measures are usually necessary to reduce intracranial pressure. If the pressure is elevated due to generalized cerebral contusion and edema, 50 per cent glucose solution given intravenously in 100 cc. doses may be helpful. Curiously, blood plasma seems equally beneficial. Spinal puncture may be done for transient reduction of intracranial pressure. If a rise in temperature is accompanied by progressive focal neurologic signs, it is because localized bleeding has occurred, and surgical intervention then is necessary.

In recent years, early ambulation has been prescribed for patients with injury of the head. In general, the author permits patients to become ambulatory as soon as they can be up and about without exaggeration of existing symptoms or production of new symptoms.

Certain complications of head injury must be kept in mind during the convalescent period. These include epidural or middle meningeal hemorrhage, acute and chronic subdural hematoma, intracerebral hemorrhage or so-called late traumatic apoplexy, delayed subarachnoid hemorrhage, convulsive seizure due to localized cortical cicatrix, and the very annoying but self-limited post-traumatic syndromes.

2996 Summit Street.

Dermatitis of the Hands in Industry

Norman N. Epstein, M.D., and James R. Allen, M.D., *San Francisco*

SUMMARY

Three hundred and twenty-eight patients were referred for opinion as to whether a dermatologic condition was due to occupational causes. The answer was affirmative in two-thirds of the cases.

Of 2,260 patients seen in ordinary private dermatological practice, about 9 per cent had lesions on the hands. Of 128 patients with contact dermatitis considered to be of industrial origin, 121, or 94.5 per cent, had lesions on the hands.

Establishing industrial responsibility in cases of suspected occupational dermatitis of the hands is difficult, but in most cases a just conclusion can be reached by following certain guides.

IF a case of dermatitis is caused by a substance to which the patient is exposed in his work, the fact is usually manifest in the location and type of lesions present and in data from a carefully taken history. As is to be expected, the hands and forearms are the most frequently involved areas, since in many industries the hands are likely to come into contact with substances which are either primary irritants or sensitizing agents. Primary irritants are strong chemicals, such as concentrated acids or alkalies, which injure the skin on contact. There are many other substances, such as plastics, dyes and drugs, which produce lesions—by allergic reaction —only after sensitization has occurred.

Often a physician is called upon to decide whether dermatitis is occupational in origin. The answer is in the affirmative if there is reasonable evidence that it has been produced by irritants met with in the claimant's work or that some preexisting eruption has been aggravated by these contacts.

In many instances of dermatitis of the hands the cause is obscure and the condition may be resistant to treatment. These difficult cases cannot be accurately diagnosed or classified without thorough knowledge of those dermatoses which commonly occur on the hands. The complexity of this problem can be appreciated by studying the reports of Wise and Wolff,[13, 14] Callaway and Barefoot,[3] Ayres and Anderson,[1] Downing,[4] Lane et al.,[5] Peck et al.,[7] Blaisdell and Swartz,[2] Rowe,[8] Sulzberger and Baer,[10] and Livingood and Pillsbury.[6]

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From the Subdivision of Dermatology of the Division of Medicine, University of California School of Medicine, and the Department of Dermatology, Mount Zion Hospital, San Francisco.

It is often most difficult to state definitely that a condition is non-industrial in cause. Many physisicians with an industrial practice adopt theories which make the decision easier, even though adequate proof of the etiologic factors may not be present in the case in question. The concept of the role of dermatophytosis and the dermatophytid in producing hand eruptions, which was propounded by Williams[12] in 1926, is an example of such a theory. Williams stated that persons with superficial mycotic infections of the feet often become sensitized to the products of the fungus and that vesicular eruptions of the hands occur because of absorption of these substances from the foci on the feet. This theory is still held to be valid; but in the early enthusiasm for it, industrial physicians had a tendency to regard all vesicular or eczematous eruptions of the hands as dermatophytid reactions if the patient had dermatophytosis of the feet. Inasmuch as the large majority of adults have chronic dermatophytosis of the toes, it can be easily seen how this occurred. The authors agree with Wise and Wolff[14] that "among the rank and file of practitioners the tendency to make false interpretations of these simultaneous eruptions on the feet and hands has become far too prevalent. This explanation [the dermatophytid theory] is delightfully simple; all it lacks is confirmation." It is well to adopt a cautious attitude toward new explanations or theories, such as those ascribing vitamin deficiencies and allergic reaction to foods as the cause of eruptions on the hands, and to demand adequate proof before making binding decisions in given cases.

The present study is based on observation of 328 patients with dermatitis who were referred to the authors in the four years 1946-1949 for opinion as to whether or not the disease was of industrial origin. In 218 cases, about two-thirds of the total, the opinion given was that the dermatosis was caused by industrial exposure factors.

Of the 218 patients with dermatitis considered industrial in origin, 128 (59 per cent) had contact dermatitis due to sensitization or primary irritation from substances contacted during their work (Table 1). Of the 128 patients in this group, 121 (94.5 per cent) had involvement of the hands and forearms, and 83 (65 per cent) had no other involvement. These figures emphasize the need for a thorough knowledge of dermatoses of the hands in industrial dermatologic practice.

The patients with eruptions of industrial origin were employed in 58 different occupations. Table 2 lists the occupations in which there were three or more patients. Other patients were cosmeticians, leather workers, dentists, cannery workers, food handlers, etc.

TABLE 1.—*Diagnoses in 218 Cases of Dermatosis of Industrial Origin*

Diagnosis	No. Cases
Contact dermatitis	128
Hands and forearms	83
Hands and other areas	38
Hands not involved	7
Infectious eczematoid dermatitis or pyoderma secondary to industrial injuries	52
Chronic paronychia	11
Dermatitis medicamentosa secondary to treatment of industrial injuries	16
Dermatophytosis	3
Miscellaneous	8

TABLE 2.—*Type of Work Done by 120 Patients With Eruptions of Occupational Origin (most common, in order of frequency)*

Occupation	No. Patients
Cook	13
Painter	12
Mechanic	10
Brewery worker	10
Dishwasher	10
Domestic worker	9
Janitor	7
Teamster	6
Photographer	6
Printer	5
Carpenter	5
Candy maker	5
Florist	5
Cleaner	4
Baker	4
Bartender	3
Waitress	3
Lubricator	3

Table 3 indicates the wide variety of conditions which workers and their employers often suspect to be industrial in origin. It is of interest that a positive diagnosis of dermatophytosis of the feet with a dermatophytid reaction of the hands was made in only 11 patients (3.3 per cent) of the entire group referred for opinion. These patients, however, make up 10 per cent of the group with lesions considered non-industrial in cause.

COMPARISON OF PATIENTS IN THE USUAL PRIVATE PRACTICE AND THOSE IN INDUSTRIAL PRACTICE

As was previously noted, 94.5 per cent of 128 referred patients with contact dermatitis of industrial origin had involvement of the hands and forearms. Of 2,260 patients observed in private practice during the same period, only 9 per cent had dermatologic lesions on the hands.

Sixteen different kinds of dermatosis were diagnosed in a series of 201 patients in private practice who had lesions of the hands alone or of the hands and other parts of the body (Table 4). There are, of course, other conditions which may affect the hands and which were not included in this study. These include granuloma annulare, deep fungous infections, syphilis, leprosy, lupus erythematosus, lupus vulgaris, sarcoidosis, xanthomatosis, epithelioma, verruca, and others.

TABLE 3.—*Diagnosis in 110 Cases of Dermatosis Considered Non-Occupational*

Diagnosis	No. Cases
Generalized dermatitis of internal origin	18
Dermatophytosis with dermatophytid reactions of the hands	11
Contact dermatitis	18
Scabies	11
Herpes zoster	6
Seborrheic dermatitis	5
Miscellaneous (Pityriasis rosea, furunculosis, urticaria, eczema, pernio, acne rosacea, herpes simplex, keratoses, etc.)	41

The number of possible causative conditions indicates the complexity of the problem of differential diagnosis of eruptions of the hands. Although it is beyond the scope of this paper to attempt a detailed discussion of the differential diagnosis of eruptions of the hands, a few words should be said concerning the most common and most baffling of these lesions, namely, vesicular and eczematous eruptions of the hands. These eruptions are frequently obscure in origin and therefore are difficult both to diagnose and to treat, particularly in patients seen in ordinary private practice. Many physicians, and the majority of dermatologists, agree that a differential diagnosis cannot be made on clinical appearances alone. At times, as was suggested by the work of Waldbott and Shea,[11] the distribution or the pattern of the lesions will lead to discovery of the causative agent of a contact dermatitis. In other instances, the kind of lesions and the distribution will suggest a dermatophytid reaction. The influence of vasomotor instability or psychogenic factors will be apparent in some cases. It is also possible for a combination of causes to produce the eruption.[10] As the morphologic features of the lesions are rarely diagnostic, all the known etiologic elements must be analyzed in each case; even then, in many cases the origin will remain obscure.

Despite the numerous conditions which may affect the hands, the determination as to whether an eruption of the hands has been produced or aggravated by substances contacted in the patient's work need not be too difficult.

EVALUATION OF THE INDUSTRIAL NATURE OF ERUPTIONS OF THE HANDS

The evaluation of an eruption of the skin to determine whether it is of occupational origin requires (1) some knowledge or understanding of the conditions of the occupation, (2) a careful history, (3) a complete examination of the skin, and (4) the use of at least two specific procedures: (a) microscopic and cultural methods for detecting fungi and (b) the skin patch test.

TABLE 4.—*Causes of Eruptions of the Hand in 201 Cases Observed in Private Practice*

Diagnosis	No. Cases
Contact dermatitis	68
Eczematoid dermatitis (unclassified)	45
Dermatophytids	27
Infectious eczematoid dermatitis	13
Atopic dermatitis	8
Dermophytosis (primary)	8
Scabies	7
Nummular eczema	6
Toxic dermatitis, internal origin	5
Localized neurodermatitis	4
Chronic paronychia	4
Seborrheic dermatitis	2
Psoriasis	1
Dyshidrosis	1
Arsenical keratoses	1
Tuberculid	1

1. The physician must know (a) what skin irritants are involved in an occupation, (b) whether such irritants can produce the type of eruption in question, (c) how and where exposure takes place at work, and (d) whether the distribution of the eruption is compatible with the exposure.

2. Certain points in the history must be brought out: (a) Was the patient free of the eruption before starting the occupation? (Aggravation of a pre-existing eruption may be an exception.) (b) Was there a correct time-relationship between exposure and the development of the eruption? (c) Are there other workers in a similar occupation and exposure who have similar skin eruptions? (d) Are the areas of the eruption at the sites of maximum exposure? (e) Are there outside non-occupational exposures? (f) And most significant, did the eruption first occur after contact with the agent or agents in question, improve after cessation of exposure, and then flare again or recur after re-contact with the agents?

3. Examination of the entire skin surface is important and should be routine in every case. Information may be obtained which will assist in determining the occupational nature of the eruption. Exposed body surfaces are usually the common sites for lesions of industrial origin, but the covered parts of the body may be involved by indirect contamination, by contact with the hands, by penetration through the clothing, or by internal absorption. Friction of the clothing alone may be an important factor to consider. Complete information may give further knowledge of the distribution of the eruption.

Not only the distribution but the character of the eruption is important in determining the occupational aspect of the condition. Eczematous eruptions, either from primary irritants or skin allergens, are the common lesions, although paronychia, keratoses, folliculitis and acne-like disorders are occasionally industrial in origin.

4. Most eczematous eruptions are due to primary skin irritants; from 15 to 20 per cent arise from specific skin allergens or skin sensitizers.[9] The use of the skin patch test for determining specific sensitizing substances is essential for the diagnosis of the latter eruptions.

In doing the patch test, it is important to avoid using a substance in a concentration known to be a primary irritant. There are publications which list the substances,[9] giving the proper concentrations for use, the vehicles, and the time they should be left on the skin in order to distinguish hypersensitivity from primary irritation.

The patch material commonly used consists of a piece of adhesive plaster about one and one-quarter inches wide, with a somewhat smaller central section of cellophane. The substance to be tested is applied to a piece of gauze or smooth white cotton sheeting about three-quarters of an inch square. As adhesive material frequently produces dermatitis, it is important to have the testing substance separated by a sufficient margin from the adhesive plaster so that confusion in reading the reaction may be avoided. The gauze or cotton square is then moistened slightly, but not saturated, with the liquid substance to be tested. If powders or scrapings are used, they are applied to the gauze after it has been slightly dampened with water. Fabrics and solid material, such as rubber, metal, plastics, etc., may be dampened and applied in place of the gauze.

The patches must be applied to an area of normal skin. They are best placed on convex surfaces, usually on the arm, the back or possibly the thigh. Concave areas, such as those of the mid-back and shoulder, are not recommended. It is advisable to use additional strips of adhesive tape to keep the patch in firm contact with the skin. Scotch tape may be substituted when sensitivity to adhesive plaster is known to exist. The patches are left in place and kept dry for 24 to 48 hours, but not over 96 hours. It must be remembered that sweating and heat will hasten a reaction. The patient should be advised to remove the patches or return for observation if excessive itching or any burning occurs.

The typical positive reaction to a skin sensitizer is a fairly sharply demarcated, red, edematous and vesicular itching spot. The reaction may vary in degree from mild erythema to bullous formation. In contrast, a moderate reaction to a primary irritant tends to be erythema with less edema; the site is less raised and there may be little or no itching. The superficial layers of the skin may be slipped off by the finger, leaving a moist area. A severe reaction from primary irritation may occur as a sharply outlined blister or a necrotic ulcerated area with relatively little edema and vesiculation. Burning instead of severe itching may be present. Allergic reaction tends to become more pronounced during the day following removal of the patches, whereas reaction from primary irritation tends to remain the same or to improve. Thus, if reaction is questionable, the patient should be observed one or two days after removal of the patches. Erythema from adhesive plaster also may disappear during this period.

Care must be taken that patch tests are not made:

(1) on patients with acutely developing skin eruptions, (2) with unknown substances until they are standardized, (3) with the wrong vehicle, (4) on an exposed skin area where a prolonged reaction may result, (5) with primary irritants, and (6) with the wrong concentration.

In some circumstances there may be negative reaction even though the patient has sensitivity to the agent tested: (1) the area tested may be too remote from a localized site of skin sensitivity; (2) the patient may be in a so-called refractory phase of sensitivity; (3) the test may not be adequate to reproduce the conditions met with in the occupation. Neither a positive nor negative reaction is significant unless it coincides with the clinical data. The most significant criteria are that the eruption develops on exposure to the substance in question, subsides when exposure is eliminated, and flares again on reexposure to the substance.

TREATMENT OF CONTACT DERMATITIS PRODUCED BY IRRITANTS MET WITH IN INDUSTRY

1. *Preventive.* In almost all industries workers may come in contact with substances which act as primary irritants or sensitizers of the skin. Workers in certain occupations, such as painters, those engaged in the manufacture or the use of a large variety of chemicals, photographers, lithographers, cosmeticians, those who handle greases and oils, janitorial workers, printers, cannery workers, food handlers and many others, are more liable to have such lesions than are salespeople, clerical workers, elevator operators, transportation workers, and the like. In industries where contact irritations are likely to occur, every effort should be made to prevent unnecessary exposure to these substances. Certain workmen, such as electric battery workers, should wear rubber gloves. A cotton glove should be worn next to the skin to avoid sensitization to the rubber itself and to prevent maceration of the skin. Harsh and abrasive soaps for cleaning the skin should be avoided. Irritating solvents should not be used. A protective cream, such as lanolin or boric acid ointment, is helpful.

2. *Active Treatment.* In treating dermatitis, the most common mistakes made are over-treatment and the application of remedies which in themselves may be irritating or sensitizing. A strong mercurial, salicylic acid, or tar preparation may make the eruption much worse and increase the patient's disability greatly. Preparations containing sulfathiazole, penicillin, butesin picrate, etc., may produce allergic or sensitization reactions and again prolong disability.

In treating acute dermatitis of industrial origin the authors use wet dressings. A solution of aluminum acetate, diluted 1:15 to 1:20, is frequently used as a continuous cold wet dressing. Hand baths in a solution of lukewarm boric acid or potassium permanganate, diluted 1:5000, three times daily, for one-half hour, are used if there is evidence of secondary pyogenic infection. In the interim between hand baths, a mildly antiseptic lotion, such as 5 per cent tincture of Metaphen[®] in calamine lotion, is applied. Greases, such as ointments, pastes, and other oil-containing bases, are never used until the acute phase of the eruption has passed.

Antibiotics are given when secondary pyogenic infection, resulting in lymphangitis and adenitis, is present. Penicillin, streptomycin, and aureomycin are not used locally because of the sensitizing qualities of these substances. Bacitracin and tyrothricin may be used locally, although they accomplish no more than does a mild preparation of the time-honored ammoniated mercury.

Therapy with x-ray or cold quartz ultraviolet light is a useful adjunct in the treatment of these conditions, if used judiciously.

In addition to local therapy, at times it is necessary to treat the general condition of the patient, especially when dealing with elderly persons and persons with nutritional or systemic disturbances.

3. *Prognosis.* Contact dermatitis of occupational origin usually clears within a few weeks, providing the patient avoids contact with the causative substances and if proper treatment is given. A group of 34 patients with contact dermatitis was studied to determine the length of time required for the condition to clear. The time varied from one to 36 weeks: In 11 patients, ten weeks or more was required; in the remaining 23, six or less weeks was necessary. The patients who improved more slowly were those in whom the eruption involved other parts of the body in addition to the hands.

Recurrences are common if the patient returns to his previous occupation without taking adequate precautions to avoid further contact with the sensitizing substances. Workers who have had true sensitization reactions are more liable to have recurrence than are those with eruptions due to primary irritants.

The prognosis for dermatitis of industrial origin may be affected by the age and general health of the patient. The condition is often more resistant to treatment and improvement is slower in elderly people and those below par physically than in younger and more physically fit individuals.

The prognosis is greatly changed when localized dermatitis of the hand becomes widespread and extensive. Patients in whom this kind of absorption dermatitis develops are the most difficult to treat successfully. Repeated attacks of dermatitis often lead to the generalized form.

COMMENT

Dermatosis of industrial origin is probably the most common cause of disability in industry. According to Schwartz,[9] approximately 65 per cent of all industrial disabilities are dermatological. The importance of correct early diagnosis and proper treatment of these injuries is obvious. Much suffering, lost man-hours of work, and financial loss thus may be avoided.

First-aid treatment at the plant should be limited to the simple remedies—only soothing lotions, wet dressings or mild antiseptics should be applied. If

the condition persists longer than a week, dermatological consultation should be sought. It is often impossible to determine accurately the industrial nature of a lesion if it has been irritated or altered by previous treatment. From the standpoint of the insurance carrier. an accurate diagnosis from the start is an economy.

The industrial physician must be careful in judging the nature of an eruption. It is far too easy to make a decision which may be unfair to the worker or to the insurance carrier. It does not appear just to state unequivocally that a skin eruption of the hands is due to allergic reaction to food, to dermatophytosis, or to vitamin deficiencies unless there is adequate proof. It is equally unjust to declare that generalized psoriasis, scabies, lichen planus or dermatitis contracted at home as a result of painting the house or repairing the automobile is of industrial origin.

It is particularly true in industrial medicine that the physician must constantly avoid prejudice, so that the parties concerned are not unfairly affected by inaccurate decisions.

450 Sutter Street.

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Discussion by Wm. F. B. Harding, M.D., *Sacramento*

All true occupational dermatoses are curable if the cause is removed and sufficient time is allowed to assist the skin to return to normal; and, except for hypersensitivity, the disability is never permanent. It follows then that the industrial patient must, in general, be treated until he is well. In the instance of simple contact dermatitis from a primary irritant, this reasoning should and does hold true.

Unfortunately, however, as Doctors Epstein and Allen have so aptly pointed out, other complicating factors frequently are present. Such conditions as a fungus infection (active or dormant) on the feet, hyperhidrosis and neurocirculatory dyshidrosis of the hands, and finally, a so-called (for want of a better term) eczematous or allergic tendency may be present. In some instances of workers with allergic sensitization to occupational exposures, a change of occupation is almost mandatory if they are to remain free of dermatitis. However, some persons with hypersensitivity gradually become desensitized while continuing the same kind of work.

The authors have pointed out the necessity for proper evaluation of complicating factors in deciding whether or not dermatitis of the hands is due to the patient's occupational exposures or is aggravated by them.

It is my experience that dermatitis that is aggravated by occupational exposures is often the most difficult to clear or cure. Certain underlying or preexisting factors, such as those just mentioned, may render cure unlikely or even practically impossible. In such circumstances, the patient and insurance carrier should be so advised and treatment terminated when it is felt that maximum improvement has been attained.

Every case of dermatitis of the hands is definitely an individual problem and generalizations as to diagnosis and treatment are to be avoided. The authors' criteria for the evaluation of the industrial nature of hand eruptions should be most helpful to those practicing industrial medicine. The importance of avoiding overtreatment of occupational dermatitis cannot be too strongly emphasized.

An employee with generalized or severe localized occupational dermatitis is an expensive liability. For their own welfare as well as that of the patient, employers and insurance carriers should make every effort not only to assure competent early diagnosis and treatment of suspected occupational dermatosis, but to educate employees to avoid self-treatment. In so doing, much loss of time from the job, loss of wages and prolongation of compensation can be avoided.

CASE REPORTS

- Non-Tuberculous Psoas Abscess
- Infectious Mononucleosis

Non-Tuberculous Psoas Abscess

Clifford L. Graves, M.D., *San Diego*, and
Morgan Skinner, M.D., *Chula Vista*

PSOAS abscesses are of two kinds, tuberculous and non-tuberculous. Most textbooks give the impression that the tubereulous ahscesses are far the more common but Bahn[1] in 1943 reported that of 35 cases of psoas abscess observed at the Charity Hospital in New Orleans, 60 per cent were tuberculous and 40 per cent were non-tuberculous.

Because the diagnosis of non-tuberculous psoas abscess is so easily missed and because the condition receives very little attention in the current literature, the following case is reported.

REPORT OF A CASE

A 53-year-old white housewife eomplained of pain, of ten days' duration, in the right lower quadrant of the abdomen and the right leg. The onset of these symptoms followed a severe head cold. Three years earlier a similar attack had occurred. At that time the patient was hospitalized for a few days but no definite diagnosis was established. In the intervening years the patient had remained reasonahly well although there were occasional attacks of pain in the right lower quadrant of the abdomen and down the leg. Treatment was not sought during these attacks. There were no associated symptoms referable to the gastrointestinal or the genito-urinary tract. On examination an ill-defined mass was palpated in the right lower quadrant of the abdomen. It extended from the flank to the groin and seemed to be retroperitoneal. The liver and the spleen could not be felt and the pelvic organs were normal to palpation. Motion of the right hip was free. There was slight pitting edema of the right leg without clinical evidence of thrombophlebitis. The heart and lungs were normal. Blood pressure was 110 mm. of mercury systolic and 80 mm. diastolic.

Results of urinalysis were within normal limits. In examination of the blood, moderate anemia was noted and leukocytes numbered 15,950. Result of a Wassermann test was negative for syphilis. No abnormality was observed in an x-ray film of the chest. In a film of the abdomen there was obliteration of the right psoas shadow. The lumbar spine was normal roentgenographically, hoth on anteroposterior and on lateral view. In barium studies the stomach and the upper intestinal tract were normal in appearance but a filling defect of the cecum and the ascending colon was observed. The impression was that of an extrinsic mass. In excretory urograms some downward displacement and rotation of the right kidney was noted. There was slight clouding of the costophrenic angle on the right.

The patient was febrile, with temperature elevations to 102° F. After one week of observation, operation was carried out. The provisional diagnosis was retroperitoneal abscess of undetermined origin. The incision extended from the tip of the last rib to the groin. There was a giant abscess in the retroperitoneal region, overlying the psoas and extending from the second lumbar vertebra to the groin. The cavity was as large as a fist and contained about a pint of thiek, creamy pus. No organisms were ohserved in a smear of the pus, and none grew on a culture. The ascending colon, the cecum, and the appendix were carefully palpated through the peritoncum. No lesions were noted. The right kidney was also normal to palpation. The abscess was drained through a stab wound in the groin and the main incision was closed. A biopsy specimen from the wall of the abscess was reported as non-specific inflammatory tissue.

Roentgenogram with barium enema. Note the poor filling of the ascending colon because of pressure from the psoas abscess.

Convalescence was uneventful. All drainage stopped within three weeks and the patient felt well.

DISCUSSION

Pyogenic psoas abscess may be hematogenous, lymphogenous, traumatic, or idiopathic. It may also originate by direct spread from adjacent organs.

Hematogenous abscesses are those following puerperal sepsis and pneumonia. Lymphogenous abscesses result from breakdown and suppuration of lymph nodes under the psoas fascia. Traumatic abscesses start in a hematoma. Direct extension occurs from neighboring structures, particularly the kidney and the appendix, but also the colon, the pelvic organs, and even the ischiorectal fat.

It is interesting to speculate upon the etiologic classification of the case here reported and upon how long the abscess had been present. As the urine was normal, as no abnormality was observed in a urogram, and as the kidney was normal to palpation, it is improbable that the abscess was of renal origin. The intestinal tract was normal and so was the lumbosacral spine. Therefore, the common foci were not present there. In all probability, the lesion was lymphogenous, beginning from lymphadenitis of the psoas region three years previously, the nodes then gradually breaking down and forming a sterile abscess which remained dormant during the intervening years. Eventually, perhaps under the stimulus of upper respiratory tract infection, the abscess spread rapidly along the established anatomical planes, causing the symptoms noted.

In the acute phase, most of the salient features of pyogenic psoas abscess were present:

1. There was pain and a mass in the right lower quadrant of the abdomen, together with evidence of sepsis.

2. Fixation of the hip in flexion—a sign that occurred in 58 per cent of the cases reported by Bahn—was not present. Edema of the leg, which was not present in any of Bahn's patients, was noted in the present case. This edema was undoubtedly due to pressure on the pelvic veins.

3. There was roentgenologic evidence of a tumor pressing on the ascending colon and there was partial obliteration of the psoas shadow. The curvature of the spine that has been described in reports of psoas abscess was not present.

2330 First Avenue.

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Infectious Mononucleosis

With Report of Four Cases

Herbert C. Moffitt, Jr., M.D., *San Francisco*

INFECTIOUS mononucleosis is of interest because it may simulate many other disease syndromes. Interest in the disease has also been stimulated by recent reports of fatalities[5, 11, 18] from what had been described previously as an invariably benign illness. It therefore seems worthwhile to review some of the protean manifestations of this disease.

Correct diagnosis is essential in differentiating this usually benign condition from such malignant diseases as acute leukemia. It may also be important in explaining such vague symptoms as weakness and fatigue.[2]

The diagnosis of mononucleosis depends on a high degree of suspicion on the part of the examining physician. The manifestations are protean because the characteristic perivascular infiltration of abnormal lymphocytes may occur in various organs and systems in different cases.[3]

The disease may present itself as a generalized illness or it may involve a particular system. The most common manifestations are summarized in Table 1. Each may occur alone, although combinations of the various types of symptoms are more usual.[17]

Anginose mononucleosis may be confused with ordinary "sore throat," with hemolytic streptococcal sore throat, or with diphtheria. The following case from the records of the University of California Hospital is typical.

CASE REPORT

Case 1: A 27-year-old woman had severe sore throat, fever, and membranous pharyngitis suspicious enough to justify administration of diphtheria antitoxin. A leukocyte differential count of 61 per cent lymphocytes, including 20 per cent atypical cells, and a heterophil antibody titer of 1:3584 established a diagnosis of mononucleosis.

Fever commonly accompanies some of the other manifestations, although it may occur as the chief symptom. Thus, mononucleosis is one of the causes of "fever of undetermined origin." In the following two cases taken from the records of University of California Hospital, diagnoses of typhoid fever and bacterial endocarditis, respectively, were seriously considered until the true diagnosis of mononucleosis was established.

From the Division of Medicine, University of California School of Medicine, San Francisco.

Presented before the Section on General Medicine at the 80th Annual Session of the California Medical Association, Los Angeles, May 13 to 16, 1951.

CASE REPORTS

Case 2: A 26-year-old male dental student was admitted to the hospital the first day of a febrile illness. Lymph nodes and spleen did not become enlarged.

Positive agglutination with "H" and "O" antigens at 1:320 dilution, in association with leukopenia (3,600 leukocytes per cu. mm.), led to strong suspicion of typhoid fever. The patient became afebrile in the second week of illness, the lymphocytes increased to 44 per cent of the number of leukocytes, with several atypical forms, and the heterophil titer rose from 1:28 initially to 1:112. The patient was discharged from the hospital with a diagnosis of mononucleosis.

* * *

Case 3: A 43-year-old male, who had had rheumatic fever repeatedly in childhood and had been followed in the cardiac clinic for aortic and mitral valvulitis, reported to the clinic with complaint of chills and fever of one week's duration. Because of the presence of splenomegaly and a single splinter hemorrhage, a diagnosis of subacute bacterial endocarditis was entertained and immediate hospitalization was arranged. There was no pathogenic bacterial growth on five blood cultures. The heterophil antibody titer was 1:448.

Table 1.—*Symptoms of Various Kinds of Infectious Mononucleosis*

Type	Symptoms
Anginose	Sore throat
Febrile	Chills, fever, sweats, malaise
Glandular	Tender, painful nodes
Pulmonary	Cough, chest pain, x-ray findings as in atypical pneumonia
Abdominal	Pain, nausea, vomiting
Hepatic	Anorexia, nausea, vomiting, icterus
Central nervous system	Headache, stiff neck, paralysis
Eruptive	Rash resembling rubella, scarlet fever, etc.
Insidious	Fatigue, malaise
Hemorrhagic	Bleeding
Tumorous	Tumefaction

Fever and splenomegaly subsided spontaneously, and the patient was discharged 12 days later with a diagnosis of mononucleosis.

Glandular enlargement is such a common occurrence in this condition that the disease was originally described as glandular fever. The cervical nodes are most commonly affected, but the adenopathy may be generalized and is at times quite painful.

Although cough is common, demonstrable pulmonary involvement is rare. When present, the pulmonary lesion may simulate primary atypical pneumonia clinically and radiologically. In this connection, Seifert[9] noted cold agglutinin titers of 1:32 or higher (which are usually considered diagnostic of atypical pneumonia) in a high percentage of patients with mononucleosis who had no symptoms of pneumonia.

Mononucleosis of the abdominal type may closely simulate acute appendicitis or other abdominal conditions necessitating surgical treatment.[7] Spontaneous rupture of the spleen, which has been weakened by lymphocytic infiltration, dissolution of trabeculae, and thinning of the capsule, has been reported in several cases. It usually occurs in the third week of illness and at times is apparently precipitated by too vigorous palpation.[11, 15]

Hepatic mononucleosis has been the subject of several recent publications. It resembles ordinary infectious hepatitis, both clinically and pathologically. Almost every patient with mononucleosis has some diminution of liver function,[11] but only a few have clinical signs of jaundice.[16] The jaundice usually lasts about three weeks, although Abrams[1] described one patient with intense jaundice which persisted over 11 weeks. The following case is typical of mononucleosis of the hepatic type.

CASE REPORT

Case 4: A 26-year-old male medical student had fever for one week and was then afebrile for two weeks in the hospital. Hepatomegaly developed. In a bromsulfalein test there was 6 per cent retention at one hour and a thymol turbidity test reading was 21 units (normal 0-7 units). Lymphocytosis (66 per cent, with 10 per cent atypical forms) and a heterophil titer of 1:1792 proved the hepatitis was associated with infectious mononucleosis.

Central nervous system involvement, with clinical manifestations of benign lymphocytic meningitis, encephalitis, peripheral neuropathy, Guillain-Barre syndrome, or bulbar poliomyelitis, has been described with increasing frequency in recent years.[12, 15] Slade[10] reported on two soldiers with mononucleosis who were discharged from the Army because of persistent nervous system damage. Other investigators have reported cases in which death resulted from respiratory paralysis. Piel[8] described a case of infectious mononucleosis complicated by serous meningitis, encephalomyelitis and bilateral papilledema. Dolgopol[5] has recommended determination of heterophil titer in all acute neurological conditions of obscure cause. Tidy[14] noted that clinical involvement of the nervous system may precede, accompany or follow the hematologic changes characteristic of mononucleosis.

Hemorrhagic manifestations are rare in mononucleosis and should ordinarily suggest another diagnosis, such as acute leukemia, but Dameshek[4] and Wallerstein and Madison[16] reported cases of mononucleosis with thrombopenia and purpura. Thompson[13] described frank hematuria as a manifestation of infectious mononucleosis.

Tumefaction, other than enlargement of nodes, spleen, or liver, is a rarity in this disease, but Lucia[6] described a patient with cauliflower-like growths on the cervix which were thought to be neoplastic but were found to be caused by mononucleosis. Subsequently the growths disappeared spontaneously.

The myocardium may be involved in mononucleosis. Electrocardiographic changes indicating myocarditis are known to occur. Focal myocarditis has been observed at autopsy, and in at least one case death was attributed to myocardial involvement.

Infectious mononucleosis should be considered in a variety of clinical pictures. The presence of characteristic hematologic changes or heterophil titer may confirm the diagnosis.

909 Hyde Street.

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EDITORIAL

Medical Care on the March

This month the California Medical Association embarks on a program of medical public relations which is unique and which has already drawn nationwide attention.

The program is a composite result of several studies, including the report of physician-patient relationships by Ernest Dichter, Ph.D., the recommendations of the Advisory Planning Committee, the report of the Association's Committee on Medical Economics and numerous suggestions from county society offices which operate actively in the business administration in physicians' offices.

In its initial stages, this campaign will call for the dissemination of suggestions aimed at creating for the public two basic guarantees. First is the guarantee of the availability of medical care under any and all circumstances. This will include medical care at any time of the day or night, on any day of the year, and without regard to the ability of the patient to pay. Briefly summarized, it means "Medical care for all, regardless. . . ."*

This guarantee may sound like a big order but on analysis it comes down to little more than the organization of medical resources in the interest of the patient. At present the physicians in organized medicine in any community are actually delivering service on this basis to all the people of the community even though not by formally established procedure. When they can organize their own resources on an orderly basis, they can make a guarantee to the public that any person can receive medical care. regardless of circumstances.

The second guarantee to the public will be one of protection against possible abuses by physicians who are members of the American Medical Association. This will include protection against acts of malpractice, against unnecessary or incompetent procedure, against overcharges for service and against unethical acts by member physicians. Such protection is already given the public by the vast majority of physicians; the organized effort will be to protect the public from such acts by the few in the profession who may abuse their professional privileges.

Here, in a nutshell, is the program the C.M.A. is entering into. Its objectives are to prove to the public that the practice of medicine, so far as it is within the purview of the Association, is, in deed as well as in word, a service performed for the benefit of the public — to prove that member physicians honor the terms of the opening statement of the Principles of Medical Ethics, that "reward or financial gain is a subordinate consideration."

If the public is guaranteed the availability of high quality medical care under all circumstances, and if the public is guaranteed protection against ill-advised acts on the part of a few physicians, the public will take to its heart the reputable practitioners who make the guarantee and will reject any politically-inspired idea of dictatorial governmental medicine.

To implement this program and to assist all county medical societies in putting it into effect, the C.M.A. has employed two field representatives and has named its present field secretary as director of public relations. This constitutes a team of experienced men who can assist county societies and their members in earning the respect and admiration of their patients and of the residents in their communities, by performing in the highest traditions of the profession.

As time goes on, other facets of the proposed program will be put into effect, as authorized by the governing bodies of the C.M.A. Meanwhile, the start which is now being made will carry to the people of the state the message that medicine means business and means its services to be performed for the good of the people. The effect of this program, both on the profession and the public, is bound to be salutary.

*Phrase coined by the Alameda-Contra Costa Medical Association.

Letters to the Editor . . .

Incidence and Importance of Thyroid Cancer

Discussing discrepancies in the frequency of thyroid cancer reported by surgeons and surgical pathologists with that reported by internists and autopsy pathologists, George Crile Jr., in the article on thyroid cancer in the *Journal of Clinical Endocrinology* of September 1950, makes the following statement (page 1155): "Until a basic statistical research is carried out in which a large population group is studied for a lifetime and in which no patient is subjected to thyroidectomy, and all of the thyroids are examined by serial section at autopsy, we shall have no accurate knowledge of the incidence and significance of cancer of the thyroid or its relationship to benign types of goiter."

It would be rather difficult in these days of ready thyroid surgery for even minor anatomical abnormalities of the gland to find a sufficient number of patients to satisfy the conditions of the first clause in the above quotation. Prior to the early 1920's, however, there appeared publications both clinical and pathological, which do meet these requirements and which stress the infrequency of cancer of the thyroid as a clinical problem. For example, if one reads successive editions of Osler's "Principles and Practice of Medicine," one notes in the earlier editions from the first through the ninth of 1923 this statement regularly repeated under Thyroid Tumors: "Cancer and sarcoma, which are rare, have a surgical interest." It is not until the tenth edition of 1925, published shortly after thyroid surgery became a safer and hence more frequent procedure, that the following statement appears under Thyroid Tumors: "Malignant tumors are more common than statistics usually indicate. Two hundred seven cases were found in 16,558 thyroidectomies at the Mayo Clinic. . . ."

Of what clinical significance are these new-found pathologically determined "malignant" lesions if up to three years before, persons with the same but unoperated and undiscovered lesions rarely suffered difficulty from them? These figures can lead only to the unconscionable conclusion that only the operated frequently demonstrate thyroid carcinoma, while the unoperated rarely suffer from their thyroid "malignancies"! The writer's experience, dating back to 1928, of over 2,000 autopsies mostly upon middle-aged and older persons, without finding a single instance of thyroid cancer being even a remote factor in causing death, leads him to question the reported great frequency of clinically important forms of this disease.

The second clause in the quotation, relative to serial section of the thyroid at autopsy, brings up the point of the need for differentiation between lesions of the thyroid interpreted histologically as malignant and their implied seriousness as a clinical problem. Especially in the case of the thyroid, are these two not necessarily synonymous. Johnson (*Arch. Surg.*, 59:1088, 1949) examined 165 completely removed thyroid glands from autopsy material by sectioning them at 2 to 3 mm. intervals and found two unsuspected lesions interpreted as malignant. One wonders what the frequency of malignant lesions would have been had sections been made at 1 mm. intervals or less. Complete serial section of the glands might have revealed even more areas interpreted as malignant; but what clinical importance do these "malignancies" possess if a control group with the same but undiscovered lesions live out their normal life's span with evidence of clinical malignancy resulting from such lesions no more often than rarely? In other words, *dying* with a lesion is not necessarily synonymous with dying *from* that lesion.

Thus, clinical and pathological experience up to 1925 as exemplified by Osler's textbook may be taken to represent the frequency of clinically significant thyroid carcinoma, whereas the statistics of more recent years include the incidence of lesions interpreted histologically as malignant but which are not necessarily clinically so, unless, of course, there has been a recent sudden actual increase in the frequency of thyroid malignancy, which possibility is not supported by current autopsy statistics.

Laurence M. Hutner, M.D.
337 South Beverly Drive
Beverly Hills

CALIFORNIA MEDICAL ASSOCIATION

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JOHN HUNTON, Executive Secretary.....General Office, 450 Sutter Street, San Francisco 8
ED CLANCY, Director of Public Relations.....Southern California Office, 417 South Hill Street, Los Angeles 13, Phone: MAdison 8863

NOTICES AND REPORTS

Executive Committee Minutes

Tentative Draft: Minutes of the 228th Executive Committee Meeting, San Francisco, August 15, 1951.

The meeting was called to order by Chairman Lum in the offices of the Association at 5:30 p.m., Wednesday, August 15, 1951.

Roll Call:

Present were President MacLean, President-Elect Alesen, Council Chairman Shipman, Speaker Charnock and Auditing Committee Chairman Lum, Editor Wilbur and Secretary-Treasurer Daniels.

Present by invitation were Executive Secretary Hunton, Legal Counsel Hassard, A.M.A. President John W. Cline, A.M.A. Board of Trustees Chairman Dwight H. Murray, and Drs. Garnett Cheney of San Francisco, T. Eric Reynolds of Oakland and John Garthe of Vallejo, representing their respective county medical societies.

1. *A.M.A. Interim Session—December 4-7, 1951:*

Discussion was held on the advisability of a dinner being given for the A.M.A. House of Delegates when the interim A.M.A. session is held in Los Angeles next December 4 to 7. It was agreed that this should be a matter for local determination by the physicians of Los Angeles County.

2. *Death of William Randolph Hearst:*

On motion regularly made and seconded, it was voted to send a message of condolence to the family of William Randolph Hearst on the occasion of his death and to offer a floral piece at the funeral rites.

3. *C.P.S. Fee Schedule Committee:*

Discussion was held on the advisability of adding more members, representing medical specialties, to the C.P.S. Fee Schedule Committee. On motion duly made and seconded, it was voted to leave the composition of the committee at the present level of eight members, with the understanding that the committee could call in any specialist representatives it deems needed.

Adjournment:

There being no further business to come before the meeting, it was adjourned.

DONALD D. LUM, M.D., *Chairman*
ALBERT C. DANIELS, M.D., *Secretary*

C. M. A. Public Relations

To carry out its new program of public relations, the California Medical Association has named Mr. Ed Clancy as Director of Public Relations. Mr. Clancy has served as field secretary of the Association for the past three years, prior to which time he was associated with the Association's public relations counsel.

Aiding Mr. Clancy in this important work will be Mr. Glenn W. Gillette, who for the past three years has served as executive secretary of the Fresno County Medical Society, and Mr. J. L. (Jerry) Pettis, recently assistant to the president of United Air Lines. Mr. Gillette will make his headquarters at the Association's San Francisco office and Mr. Pettis at the Los Angeles office, 417 South Hill Street.

This team of three experienced representatives has already developed a large amount of material for the assistance of county medical societies and their members. All three are on call at all times for the consideration and solution of public relations problems throughout the state. Their talents are expected to contribute materially to the public esteem of physicians and their societies.

Special Announcement

CALIFORNIA MEDICAL ASSOCIATION ANNUAL MEETING

Los Angeles, April 27–30, 1952

The 1952 Annual Session of the California Medical Association will be held in Los Angeles, Sunday, April 27, to Wednesday, April 30, inclusive.

PAPERS: If you have a paper you would like to have considered for presentation, it should be submitted to the appropriate section secretary (see list on this page).

SCIENTIFIC EXHIBITS: Limited space will be available for scientific exhibits. If you would like to apply for space, please write immediately to the office of the California Medical Association, 450 Sutter Street, San Francisco 8, for application blanks. Please indicate *exact* space requirements. No exhibit shown in 1951, and no individual who had an exhibit at the 1951 session, will be eligible until 1953. *No requests for space will be considered after December 1, 1951.*

MOTION PICTURES: There will be facilities available for motion pictures. If you would like to exhibit, send your application to Dr. A. E. Smith, 1930 Wilshire Boulevard, Los Angeles.

All applications for scientific exhibit space and for time on the scientific program should be transmitted as soon as possible. The deadline is December 1, 1951.

ALBERT C. DANIELS, *Chairman,*
Committee on Scientific Work

SECRETARIES OF SCIENTIFIC SECTIONS

Allergy
Groce M. Tolbott,
909 Hyde St., San Francisco 9

Anesthesiology
Nevin H. Rupp,
Veterans Adm. Center, Los Angeles 25

Dermatology and Syphilology
Kenneth L. Stout,
9629 Brighton Way, Beverly Hills

Eye, Ear, Nose and Throat
Robert C. McNaught, Stanford University
School of Medicine, San Francisco 15

General Medicine
J. Malcolm Stratton,
2560 Bancroft Way, Berkeley 4

General Practice
Merlin L. Newkirk,
3224 Santa Ana, South Gate

General Surgery
Paul C. Samson,
2938 McClure Street, Oakland 9

Industrial Medicine and Surgery
Orris R. Myers,
525 Seventh Street, Eureka

Obstetrics and Gynecology
Donald W. deCarle,
2000 Van Ness Avenue, San Francisco 2

Pathology and Bacteriology
Charles M. Blumenfeld,
2907 J Street, Sacramento

Pediatrics
Alvin H. Jacobs,
2201 Webster Street, San Francisco

Psychiatry and Neurology
Cyril B. Courville,
1801 New Jersey Street, Los Angeles 23

Public Health
John R. Philp,
0170 Civic Center, San Diego 1

Radiology
Robert K. Arbuckle
Samuel Merritt Hospital, Oakland

Urology
Roger W. Barnes,
1216 Wilshire Boulevard, Los Angeles

Questions and Answers about C. P. S.

Question: Is it necessary for the assistant surgeon or the anesthetist to list a diagnosis when submitting a bill to C.P.S.?

Answer: Yes. All bills paid by C.P.S. should have a diagnosis. In the case of assistant surgeons or anesthetists, they can expedite payments by submitting a diagnosis with their bills.

Question: Under its new contracts C.P.S. provides three months' medical care for each condition (except several listed conditions for which one year's care is provided). Is the three-month period renewable yearly?

Answer: No, this provision for three months' care is not renewable; once exhausted it is no longer available.

Question: In treating veterans under the Home-Town Care Program, is it necessary to report the results of special procedures on both the new request-for-treatment form (53-C) and the billing form (53)?

Answer: No. The reporting on the request-for-treatment form (53-C) should be of a general nature to assist the authorization officer of the Veterans Administration in evaluating the veteran's present condition. Reports of special procedures, x-rays and laboratory tests, etc., should accompany the billing form (53).

Question: In the case of a C.P.S. patient who has two-visit deductible outpatient medical coverage (and thus is responsible himself for charges for the first two visits), if I see him only twice and then refer him to another physician, is it necessary for *me* to send a bill to C.P.S.?

Answer: Yes, because it is necessary for C.P.S. to have record of the first two visits before payment can be made for the third or any succeeding visit.

Question: How much progress has been made in converting the old C.P.S. contracts to the new contracts?

Answer: In Northern California this conversion process is virtually completed. In Southern California, as of July 31, approximately 50 per cent of the joint (C.P.S. and Blue Cross) contracts had been converted. Only the new contracts were offered for straight C.P.S. enrollments in Southern California, so no conversion of this business was necessary.

Question: Is it permissible for my secretary or office nurse to sign the statements for my services to veteran patients under the Home-Town Care Program?

Answer: No. Statements must be signed by the physician rendering treatment. A facsimile signature or signature of any person other than the physician rendering the treatment is not acceptable to the Veterans Administration.

Question: Is membership in the C.P.S. Individual Family Plan available at all times, or only during certain enrollment periods in certain areas?

Answer: Membership in the C.P.S. Individual Family Plan is available at all times, and in all areas, to those who qualify.

Question: The question concerns a C.P.S. patient who has medical-care-while-hospitalized. If this patient has been seen twice by the doctor prior to entering the hospital, will C.P.S. payment for medical services begin on the doctor's first visit in the hospital?

Answer: No. The medical-care-while-hospitalized contract provides that the member pays for the first two doctor visits to the hospital, with C.P.S. payment beginning with the third visit. The patient holding medical-care-while-hospitalized coverage is responsible for all medical care outside the hospital, plus the first two doctor visits after hospitalization.

Question: Please explain the "professional group" which C.P.S. has for doctors and their employees.

Answer: This "professional group" makes beneficiary membership in C.P.S. available to all physician members, as well as to their regular office employees—nurses, technicians, secretaries, receptionists, etc. The family dependents of the physician and of his staff employees also may be enrolled. Dues for membership in the "professional group" are handled on a direct payment basis and are payable quarterly, semi-annually or annually. The basic coverage provided is the surgical contract and the 50-day hospital contract. In addition, physician members and their staff employees may, if they desire, have either the two-visit deductible medical contract or medical-care-while-hospitalized; dependents, if they desire, may have medical-care-while-hospitalized. All who qualify may add catastrophic coverage.

Question: Does the Individual Family Plan provide for any outpatient medical service?

Answer: No. Individual Family Plan members are not eligible for outpatient medical service. The base coverage under the Individual Family Plan is surgical and hospital, with the option of adding medical-care-while-hospitalized.

Question: What are the qualifications to apply for enrollment in the Individual Family Plan?

Answer: The qualifications are that the person be under 60 years of age and a resident of California. It is not necessary to be employed or self-employed. The person may apply singly or with all eligible family dependents. Membership is dependent on satisfactory health statement.

NEWS and NOTES

NATIONAL • STATE • COUNTY

LOS ANGELES

The scientific program of the **American College of Chest Physicians,** to be held Sunday, December 2, in the Ambassador Hotel, Los Angeles, follows:

Morning Session

H. Brodie Stephens, San Francisco, moderator

The Mechanical Heart Apparatus—Sanford E. Leeds and Morris M. Culiner, San Francisco.

Pre- and Postoperative Cardiac Catheterization Findings in Mitral Stenosis—Richard S. Cosby, David C. Levinson, Willard Zinn, Sim P. Dimitroff, Robert Oblath, Varner Johns, Telfer Reynolds and George C. Griffith, Los Angeles.

Selection of Patients for Mitral Commissurotomy—George C. Griffith, Pasadena.

Surgical Treatment of Cardiac Valvular Stenosis—William H. Muller, Jr., Los Angeles.

The Etiology and Treatment of the Physiological Changes in Chronic Pulmonary Diseases—Burgess L. Gordon, Philadelphia.

The Nature of Electrocardiographic Changes in Coronary Artery Thrombosis: An Experimental Study—Clinton Shaw, Alfred Goldman, Eliot Corday, Joshua Fields, S. Rexford Kennamer, Inga Lindgren, Allen Smith and Myron Prinzmetal, Los Angeles.

Luncheon Round Table Discussions

1. Chemotherapy in Diseases of the Chest—Emil Bogen, Olive View, and Edward Dunner, St. Louis; moderator, J. J. Singer, Beverly Hills.
2. Cancer of the Lung—Lyman A. Brewer III, and Lewis W. Guiss, Los Angeles; moderator, Seymour M. Farber, San Francisco.
3. Modern Management of Pulmonary Tuberculosis—Reginal H. Smart, Los Angeles, W. L. Rogers, San Francisco, and James S. Edlin, New York; moderator, Chesley Bush, Berkeley.

Afternoon Session

J. Winthrop Peabody, Washington, D.C., moderator

100 Cases of Spontaneous Pneumothorax—Robert Walters, John N. Briggs and Francis X. Byron, Los Angeles.

Primary Tuberculosis in Adults—Jay Arthur Myers, Minneapolis.

The Significance of the Bronchopulmonary Segment—Chevalier L. Jackson, Philadelphia.

Pulmonary Histoplasmosis—Alfred Goldman, St. Louis.

Chemotherapy for Tuberculosis, Using Minimal Dosage Schedules—J. P. M. Black, San Fernando, and Emil Bogen, Olive View.

Pre- and Postoperative Pulmonary Function Studies in the Tuberculous Patient—Frank Cline, Jr., Seattle.

Dinner

Jane Skillen, Olive View, president, California Chapter, American College of Chest Physicians, presiding

Guest Speaker: Leo Eloesser, United Nations, New York City—Activities of the United Nations International Children's Emergency Fund.

X-Ray Conference

Burgess L. Gordon, Philadelphia, and Marcy L. Sussman, Phoenix. Moderator: David Salkin, San Fernando.

* * *

The **Research Study Club** of Los Angeles has announced its 21st annual midwinter postgraduate clinical convention in ophthalmology and otolaryngology, January 14 to 25, 1952. The course on ear, nose and throat will be held January 14 to 19; the course on the eye, January 21 to 25. A special course in Surgery of the Eye will be conducted January 18 to 20 by Dr. Meyer Weiner, emeritus professor of clinical ophthalmology, Washington University School of Medicine, St. Louis.

* * *

Twenty-eight students, 26 men and two women, were admitted to the first class to enter the University of California at Los Angeles School of Medicine. They were selected from 284 qualified applicants.

SAN FRANCISCO

Dr. Anthony J. J. Rourke, physician-superintendent of Stanford University Hospitals, was inducted as president of the American Hospital Association at the annual meeting of the organization, held last month in St. Louis. He succeeded Dr. Charles F. Wilinsky, director of Beth Israel Hospital, Boston.

As president of the association, Doctor Rourke will officially represent the American Hospital Association at a number of state, regional and other national hospital association meetings and will participate on the programs of conventions and conferences of related health organizations.

* * *

The 79th annual meeting of the **American Public Health Association,** the 18th annual meeting of the western branch of the association, and meetings of 13 related organizations will be held in San Francisco, October 29 to November 2. Dr. William P. Shepard of San Francisco, president of the association, will end his term in office and will be succeeded by Dr. Gaylord W. Anderson of Minneapolis.

* * *

The **American College of Surgeons** will hold its annual meeting in San Francisco, November 5 to 9.

* * *

Two members of the faculty of the University of California School of Medicine recently were advanced to full professorship and four to clinical professorship. Dr. Alex-

ander Simon was appointed professor of psychiatry and Dr. B. V. A. Low-Beer professor of radiology. The four new clinical professors are: Dr. T. Floyd Bell, obstetrics and gynecology; Dr. Michael Hogan, ophthalmology; Dr. Mary B. Olney, pediatrics; and Dr. Robert Wartenberg, neurology.

GENERAL

Schering Corporation of Bloomfield, New Jersey, has advised the A.M.A. Council on Pharmacy and Chemistry that a shipment of its ophthalmic preparation of **cortisone acetate** marketed under the trade name Cortogen Acetate Ophthalmic Suspension is **contaminated** with Pseudomonas aeruginosa organisms. Although only one batch of the material may be contaminated, the firm informed the Council that telegrams have been sent to all its wholesale and retail outlets, as well as to all ophthalmologists, in order to effect a complete recall of all shipments of the drug. "Physicians who have any Cortogen Acetate Ophthalmic Suspension on hand at this time would be well advised not to administer it to their patients," the Council said, adding that "Schering Corporation is to be commended for its prompt action which is in the best interests of the medical profession as well as the general public."

* * *

Two California towns, Pleasanton and Rio Vista, have been granted State Health Department permits to **fluoridate their public water supplies,** and the permits have been approved by the State Board of Public Health following assurance from the California Attorney General's office that the health department action is legally sound. Any other public or private water supplier may now request similar permission, the Health Department said.

* * *

The **American Bureau for Medical Aid to China,** which conducts a fellowship program for the training of Chinese physicians and nurses in modern American medical practice and aids Chinese medical personnel dislocated by Communists, is currently engaged in a campaign to inform the American public concerning the nature of its work and to enlist active financial support, according to recent announcement by Lt. General Albert C. Wedemeyer, U. S. Army (retired), a director the organization. A. B. M. A. C. was previously supported by funds allocated by the now inactive National War Fund and United Service to China. Besides the fellowship program, General Wedemeyer said, the principal functions of the organization are to aid special medical missions (on such diseases as malaria, trachoma, and tuberculosis) and to act as ground-breaker for the U. S. Economic Cooperation Administration.

A. B. M. A. C. headquarters are at 1790 Broadway, New York 19, N.Y.

* * *

Support for the campaign for funds by **United Red Feather Campaigns of America** was given by Dr. John W. Cline, president of the American Medical Association, in the following statement:

"The United Defense Fund fills a great need during this period of mobilization and military activity in Korea. It is sustained by contributions made to the United Red Feather Campaigns. The latter perform essential functions in the normal civilian life of our communities. These worthy projects depend upon money raised during the fall campaigns. They deserve the wholehearted support of physicians everywhere.

"More and more of our colleagues are being called into the armed forces. Our contributions will provide important services for them and at the same time assist us at home by extending the activities of voluntary hospitals, clinics, nursing services and other health agencies for citizens in the lower income groups.

"The medical profession has always advocated extension of medical and health services to these people by voluntary means. Private support will eliminate the hazard of governmental participation and control.

"The U.D.F. agencies are badly needed to care for the military through the U.S.O., to assist civilians in densely populated defense areas, to establish community projects through the U.C.D.S. and to provide clothing for the Koreans through A.R.K. These are splendid activities of great importance at the present time.

"This year, it is possible for us to subscribe to both the Red Feather home activities and the U.D.F. National Service Programs at one time. Let us get behind the Red Feather Campaign this year and make it a great success. We can render great service to our own communities and our armed services by so doing and can avoid the danger of government taking over these activities."

* * *

Programs for **postgraduate symposia on heart disease** to be held on the designated dates this month in San Diego, Los Angeles and San Francisco follow:

San Diego—October 15

Auditorium, U. S. Naval Hospital

Monday Afternoon

Presiding: Dr. Anthony Yuskis, President, San Diego County Heart Association.

1:30-1:45 p.m.—The Program and Aims of the San Diego County Heart Association—Anthony Yuskis, M.D.

1:45-2:00 p.m.—American Heart Association and Its Relations to State and Local Affiliates—Mr. Robert Titus, American Heart Association.

2:00-2:45 p.m.—Essential Hypertension—Francis Chamberlain, M.D., San Francisco.

2:45-3:30 p.m.—Correctable Congenital Heart Lesions; Diagnosis and Treatment—Louis Martin, M.D., Los Angeles.

3:30-4:15 p.m.—Rheumatic Fever, Its Diagnosis and Differential Diagnosis—George Griffith, M.D., Pasadena.

4:15-5:30 p.m.—Clinical-Pathological Conference: Congenital Cardiac Disease—Captain E. V. Jobe, presiding.

Monday Evening

Manor Hotel

6:30 p.m.—Dinner.

8:00 p.m.—Angina Pectoris and Myocardial Infarction—Howard Sprague, M.D., Brookline, Mass.

Los Angeles—October 17, 18

Wilshire-Ebell Theatre

Wednesday Morning, October 17

9:25-9:30 a.m.—Opening Remarks—Edward C. Rosenow, Jr., M.D., president, Los Angeles Heart Association.

9:30-9:45 a.m.—Primary and Secondary Polycythemia with Lung Volume and Arterial Oxygen Studies—Eugene J. Ellis, M.D.

9:45-10:00 a.m.—Third Annual Prize Essay.

10:00-10:20 a.m.—Dynamics of the Pulmonary Circulation—R. S. Cosby, M.D.

Intermission.

10:30-11:00 a.m.—The Significance of the Prominent Pulmonary Artery Segment—Marcy L. Sussman, M.D.

11:00-12:00 noon—The Heart in Chronic Pulmonary Disease—Dickinson W. Richards, Jr., M.D.

Wednesday Afternoon

1:30-1:45 p.m.—Heparin Treatment of Angina Pectoris with Observations on the Two-Step Exercise Electrocardiograph—Hyman Engelberg, M.D.

1:45-2:00 p.m.—Elimination of Errors in Prothrombin Time Determinations with the Use of a Simple Control Test Applicable to Office Use—Arnold G. Ware, Ph.D.

2:00-2:15 p.m.—A Clinical Study of a Coronary Vasodilating Agent (Khellin)—Harold Miller, M.D.

2:15-3:15 p.m—Pattern of the Youthful "Coronary" Patient—Howard B. Sprague, M.D.

Intermission.

3:30-4:00 p.m.—Dynamic Significance of Cardiac Arrhythmias—Louis M. Katz, M.D.

4:00-5:00 p.m.—Round table discussion of Problems in the Management of Coronary Artery Disease—Moderator: Arthur M. Hoffman, M.D. Participants: Dickinson W. Richards, Jr., M.D., George W. Griffith, M.D., Howard B. Sprague, M.D., Eugene Levine, M.D., and Louis M. Katz, M.D.

Annual Dinner

The Lounge of the Los Angeles County Medical Association

Guest speaker: Howard B. Sprague, M.D.

Thursday Morning

9:30-9:45 a.m.—Case Findings and Techniques in Heart Disease—Edward Phillips, M.D.

9:45-10:00 a.m.—Evaluation of Thirteen Years of Patent Ductus Arteriosus Surgery—Sidney S. Sobin, M.D.

10:00-10:15 a.m.—Cardiovascular Effects of an Adrenalin-Like Compound (Vasoxyl)—Morris H. Nathanson, M.D.

Intermission.

10:30-11:00 a.m.—The Nature of the Wolfe-Parkinson-White Syndrome—Myron Prinzmetal, M.D.

11:00-12:00 noon—Mitral Commissurotomy: Indications for Surgery and Measurements of the Circulation Before and After Operation—Dickinson W. Richards, Jr., M.D.

Thursday Afternoon

1:30-2:30 p.m.—Diagnostic Challenges in Heart Disease—Howard B. Sprague, M.D.

2:30-3:00 p.m.—The Experimental Approach to the Etiology of Atherosclerosis—Louis M. Katz, M.D.

3:00-3:30 p.m.—Present Concepts and Status of the Relationship of Lipoproteins to Atherosclerosis—John W. Cofman, M.D.

Intermission.

3:40-4:00 p.m.—Electrolyte Hazards in the Treatment of Congestive Heart Failure—Helen E. Martin, M.D.

4:00-5:00 p.m.—Round table discussion of Dietary Aspects of the Management of Cardiovascular Diseases—Moderator: Lewis T. Bullock, M.D. Participants: Dickinson W. Richards, Jr., M.D., John W. Cofman, M.D., Howard B. Sprague, M.D., Helen E. Martin, M.D., and Louis M. Katz, M.D.

POSTGRADUATE EDUCATION NOTICES

UNIVERSITY OF CALIFORNIA SCHOOL OF MEDICINE—Medical Extension, Toland Hall, U. C. Hospital, San Francisco

Evening Symposia in Medicine:

Sept. 17-Dec. 17 (every Monday evening).

This is a series of evening exercises for general practitioners in the form of symposia on topics of particular interest to them. Fee: $60.00.

Contact: Stacy R. Mettier, M.D., Medical Extension, U. C. Medical Center, San Francisco 22.

UNIVERSITY OF CALIFORNIA SCHOOL OF MEDICINE, Medical Extension, Los Angeles

Obstetrics and Gynecology. October 17, 18 and 19—Intensive three-day course, 9:30 a.m. to 5:00 p.m. daily, School of Medicine, Los Angeles campus.

Recent Advances in General Surgery. Nov. 13-Feb. 11, 1952, 12 weekly evening lectures.

Guest Lecturers: Dr. Frank Glenn, Cornell University School of Medicine; Dr. Robert Elman, Washington University, St. Louis; Dr. Warren Cole, University of Illinois.

Contact: University of California Extension, Office of Medical Extension, Los Angeles 24.

Medical Stenography and Medical Office Procedures. Sept. 21 and 12 consecutive Friday meetings from 6:30 to 9:00 p.m. Extension Center, 813 S. Hill Street, Room 304.

San Francisco—October 24 to 27

Colonial Ballroom, St. Francis Hotel

Wednesday Morning, October 24

9:00-12:15 p.m.—Course in Unipolar Electrocardiography—Presiding: Richard D. Friedlander, M.D.

9:00-9:30 a.m.—Fundamentals of Unipolar Electrocardiography—John B. Lagen, M.D.

9:30-10:00 a.m.—Normal Range and Variations—Arthur Selzer, M.D.

10:00-10:30 a.m.—Arrhythmias—J. K. Lewis, M.D.

Intermission.

10:45-11:15 a.m.—Ventricular Hypertrophy—Harold H. Rosenblum, M.D.

11:15-11:45 a.m.—Myocardial Infarction—Mervyn J. Goldman, M.D.

11:45-12:15 p.m.—Bundle Branch Block—Hilliard Katz, M.D.

Wednesday Afternoon

1:30-5:00 p.m.—Heart Disease in Childhood—Presiding: Alice Potter, M.D., president, Northern California Pediatric Society.

1:30-1:55 p.m.—Brock Procedure: Indications and Results in Pediatrics—Sanford Leeds, M.D.

1:55-2:20 p.m.—Use of Unipolar Electrocardiography in the Diagnosis of Congenital Heart Disease—Maurice Sokolow, M.D.

2:20-3:30 p.m.—Cardiac Auscultation—A Panel Discussion.

Moderator: Ann Purdy, M.D.

Interpretation of Systolic Murmurs—Saul J. Robinson, M.D.

Interpretation of Diastolic Murmurs—C. R. Leininger, M.D.

Interpretation of Continuous Murmurs—Herbert N. Hultgren, M.D.

Phonocardiography—Howard B. Sprague, M.D.

Intermission.

3:45-4:10 p.m.—Psychic Impact of Heart Disease in Children—Hale F. Shirley, M.D.

4:10-4:35 p.m.—Current Status of ACTH-Cortisone Treatment of Rheumatic Fever—Vincent C. Kelley, M.D.

4:35-5:00 p.m.—Methods of Defining Rheumatic Activity—John A. Anderson, M.D.

Wednesday Evening

8:00 p.m.—Differentiation Between Cardiac, Pulmonary, and Functional Dyspnea—Dickinson W. Richards, Jr., M.D.

(This session is held in collaboration with the Medical Extension—University Extension—University of California Medical School, as one feature of a postgraduate series of 12 evening lectures in general medicine.)

Thursday Morning

Presiding: William L. Bender, M.D.

9:00-9:30 a.m.—Nonspecific Benign Pericarditis—Eli R. Movitt, M.D.

9:20-9:40 a.m.—Procaine Amide in the Prevention and Management of Arrhythmias—Arthur Twiss, M.D.

9:40-10:25 a.m.—The Dynamic Significance of Cardiac Arrhythmias—Louis N. Katz, M.D.

Intermission.

10:35-11:00 a.m.—Presidential address: Malignant Hypertension—Maurice Sokolow, M.D.

11:00-12:00 noon—Resistant Congestive Failure—Howard B. Sprague, M.D.

Thursday Afternoon

Presiding: Charles A. Noble, Jr., M.D.

1:30-1:55 p.m.—Varying Clinical Patterns of Mitral Stenosis—John J. Sampson, M.D.

1:55-2:50 p.m.—Mitral Commissurotomy: Indications for Surgery and Measurements of the Circulation Before and After Operation—Dickinson W. Richards, Jr., M.D.

2:50-3:15 p.m.—Surgical Aspects of Mitral Stenosis—Emile F. Holman, M.D.

Intermission.

3:30-5:00 p.m.—Medical and Surgical Aspects of Correctible Cardiovascular Lesions—A panel discussion—Moderator: Arthur Selzer, M.D. Participants: Robert H. Alway, M.D., Frank Gerbode, M.D., Herbert N. Hultgren, M.D., Henry D. Kaplan, M.D., Mary B. Olney, M.D., and H. Brodie Stephens, M.D.

Friday Morning

Chairman and Moderator: Lowell A. Rantz, M.D.

9:00-10:45 a.m.—Presentation of Selected Cases of Cardiovascular Problems, with Discussion of Diagnosis and Treatment.

Subacute Bacterial Endocarditis—Arthur L. Bloomfield, M.D.

Cardiovascular Side Effects of ACTH Therapy—John Luetscher, M.D.

The Abnormal Ballistocardiogram in Coronary Disease—Francis L. Chamberlain, M.D.

Cardiovascular Lues—Clayton D. Mote, M.D.

Intermission.

11:00-12:00 noon—The Heart in Chronic Pulmonary Disease—Dickinson W. Richards, Jr., M.D.

Friday Afternoon

Presiding: David A. Rytand, M.D.

1:30-2:30 p.m.—Pattern of the Youthful Coronary Patient—Howard B. Sprague, M.D.

2:30-3:00 p.m.—Experimental Approach to the Etiology of Atherosclerosis—Louis N. Katz, M.D.

Intermission.

3:10-4:35 p.m.—Arteriosclerosis and Its Sequelae—A panel discussion—Moderator: Louis N. Katz, M.D. Participants: John E. Adams, M.D., Ellen Brown, M.D., I. Lyon Chaikoff, M.D., Alvin Cox, M.D., John Gofman, M.D., Howard B. Sprague, M.D., and Edwin J. Wylie, M.D.

4:35-5:00 p.m.—Acute Arterial Occlusion—Norman E. Freeman, M.D.

Friday Evening

7:00 p.m.—Annual Dinner Meeting—Presiding: Maurice Sokolow, M.D., President.
Diagnostic Challenges of Heart Disease—Howard B. Sprague, M.D.

Saturday Morning

San Francisco Hospital

9:00 a.m.—Presentation of Patients with Various Types of Heart Disease—Presiding: J. Marion Read, M.D. Participants: Henry Brainerd, M.D., LeRoy H. Briggs, M.D., Roy Cohn, M.D., Maurice Eliaser, Jr., M.D., Peter H. Forsham, M.D., Rutherford S. Gilfillan, M.D., Marlow B. Harrison, M.D., Louis N. Katz, M.D., J. K. Lewis, M.D., Lester S. Lipsitch, M.D., Charles A. Noble, Jr., M.D., Dickinson W. Richards, Jr., M.D., Ernest Rogers, M.D., Arthur Selzer, M.D., Ben Shenson, M.D., Albert M. Snell, M.D., Howard B. Sprague, M.D., Norman J. Sweet, M.D., Clarence M. Tinsley, M.D., and Malcolm S. Watts, M.D.

INFORMATION

Change in Diagnostic Laboratory Service

Pathologists and other physicians in California who formerly sent specimens for special diagnostic services directly to the U. S. Public Service Communicable Disease Center Laboratories at Atlanta, Ga., are now required to direct all such specimens to the Division of Laboratories of the State Department of Public Health of California. This is in line with a change in policy effected by USPHS.

A letter from M. H. Merrill, M.D., Chief, Division of Laboratories, State Department of Public Health, advises that in view of the change in procedure, "physicians requiring special diagnostic work which is not available to them through their regular clinical or local public health laboratories should refer this work to the Division of Laboratories, 3093 Life Sciences Building, University of California, Berkeley. If our division is not able to provide such service, we shall take the responsibility of forwarding the specimens on to the Public Health Service."

Medical Care Costs Rise Far Less Than Other Family Budget Items

(Reprinted from *Capitol Clinic*, a newsletter issued by the Washington office of the American Medical Association.)

The American middle-income family is paying more for almost everything—but medical care costs are going up slower than any other major item in the family budget. This is reported by U. S. Bureau of Labor Statistics, based on its mid-1951 survey of living costs. (To obtain trends, BLS spot-checks prices of specific categories of goods and services; a number of union wage scales are tied to this survey.) The BLS report estimates medical care and drug costs in June at 54.7 per cent above the average for 1935-39. In contrast, clothing costs were up 104 per cent, house furnishings 112.5 per cent, household operations 61.7 per cent, recreation 68.3 per cent, personal care (such as haircuts, toilet goods) 93.69 per cent, and transportation 71.6 per cent.

This trend has been under way for some time. BLS, a Labor Department agency, estimated medical care and drug prices average 47.9 per cent above 1935-39 for all of 1950. Prices of most other goods and services last year ranged higher — in about the same proportion as prices of June of this year.

BLS gave this breakdown for June, compared with the pre-World War II average: All physicians' fees up 44.7; general practitioners' fees, 44.8; surgeons' and specialists' fees, 43.4; obstetrical fees, 65.2; dentists' fees, 59.4; hospital rates, 161.4; optometrists' fees, 34.9; prescriptions and drugs, 28.3. The survey showed that group hospitalization insurance had risen 2.9 per cent since December 1950, when the agency first began counting this item in its cost of living formula.

Medical care and drug costs were 54.7 per cent more than prewar, and medical care minus drug costs 60.5 per cent, in June. In contrast, food prices during the same period soared 126.8 per cent, or more than double medical care cost.

The BLS report complements the results of a recent national survey of physicians' incomes conducted by the Commerce Department and American Medical Association. It showed that increases in physicians' incomes since 1929 have been slightly below the increase for the general population.

Seventy-Five Per Cent of Korea Wounded Return to Duty

(Reprinted from *Capitol Clinic*)

Surgeon-General George Armstrong, back from a Korean inspection trip, reports Army Medical Department is functioning at a high rate of efficiency and contributing to troop morale. Among his findings:

1. Out of every 100 wounded men, an average of 75 eventually return to duty, 26 without leaving Korea, 35 more without leaving Japan and 14 after hospitalization in this country.

2. Death rate of wounded has been reduced to 2.5 per cent, in contrast to 4.5 per cent in World War II.

3. First aid is given in almost every case within 30 minutes; the exceptions, Gen. Armstrong learned from wounded, are generally confined to situations where the aid man attached to the unit also has been killed or wounded.

4. The new drug primaquine gives promise of becoming the first real cure for malaria; if it stands up under extensive testing, it should end the current problem of suppressed malaria breaking out after Korean veterans reach this country. The outbreaks, Gen. Armstrong believes, are not as serious as might be because of prompt and effective detection and treatment in this country.

BOOK REVIEWS

CORNELL CONFERENCES ON THERAPY — Volume Four. Edited by Harry Gold, M.D., Managing Editor, David P. Barr, M.D., McKeen Cattell, M.D., Frank Glenn, M.D., Walter Modell, M.D., and George Reader, M.D. The Macmillan Company, New York, 1951. 342 pages. $3.50.

Previous volumes of the Cornell Conferences on Therapy are undoubtedly familiar to many readers of this journal. This latest volume closely resembles the others in format and method of presentation. The emphasis is on practical aspects of therapy, although at times the discussion is quite theoretical. The editors are to be congratulated on presenting the material in such readable form, since transcriptions of unrehearsed conferences are very difficult to translate into formal presentations for publication. As one means of meeting this problem, the editors have concluded each discussion with a short summary of the various opinions presented. In an effort to be objective, these summaries occasionally do not reflect the degree of divergence of opinion that is apparent in the preceding comments. This is unfortunate on occasions where the speaker has been able to justify his point of view in a logical and thorough manner.

The sections dealing with household poisonings, treatment of diabetic emergencies, management of disorders of cardiac rhythm, medical management of hypertension, and treatment of morphine addiction contain much material of use to the general practitioner. Due to the rapid advances in scientific knowledge and the development of new therapeutic agents, any material published in book form is apt to be outdated, in part, when published. That the problem has not been surmounted in this volume is evidenced in the section on antimicrobials in genito-urinary infections.

The reviewer can recommend this volume for those physicians who desire a practical discussion of common therapeutic problems presented by the staff of one of our outstanding medical schools.

* * *

GENETICS IN OPHTHALMOLOGY. By Arnold Sorsby, Research Professor in Ophthalmology, Royal College of Surgeons and Royal Eye Hospital, London. The C. V. Mosby Company, St. Louis. 1951. 251 pages. $9.50.

The author points out that, contrary to widespread belief, medical genetics is not concerned with collecting curious pedigrees of the unconsidered trifles of pathology but at the very least is an attempt to elucidate some of the constitutional bases of disease.

In England 50 per cent of blindness is due to cataract, glaucoma and senile macular degeneration. The majority of those afflicted with these conditions are over 60 years of age. Twenty per cent of blindness is due to myopia, congenital, hereditary and developmental defects. The majority of these persons are young or middle-aged; therefore these lesions rank first in terms of years as a cause of blindness.

The book is divided into three sections: (1) a theoretical discussion of the modes of inheritance in genetic diseases, (2) isolated ocular anomalies, and (3) generalized disorders with ocular aspects.

The theoretical discussion of the modes of inheritance and genetic diseases is briefly and very clearly written. This section will probably be of greatest value to the reader who is interested in establishing a pedigree for some ocular diseases. The sections on isolated ocular anomalies and generalized disorders with ocular lesions is well illustrated but the material is covered so briefly that it offers little more than can be found in many textbooks of ophthalmology.

This book deals with a narrow field in the specialty of ophthalmology. Its greatest assets are its illustrations and its defect is its brevity. The book will probably be used as a reference for those interested in ophthalmic and medical genetics.

* * *

PHARMACOLOGIC PRINCIPLES OF MEDICAL PRACTICE—Second Edition—A Textbook on Pharmacology and Therapeutics for Medical Students, Physicians, and the Members of the Professions Allied to Medicine. By John C. Krantz, Jr., Professor of Pharmacology, School of Medicine, University of Maryland; and C. Jelleff Carr, Associate Professor of Pharmacology, School of Medicine, University of Maryland. The Williams and Wilkins Company, Baltimore, 1951. 1,116 pages. $10.00.

This second edition of a successful text has appeared only two years after the first edition, the popularity of which is indicated by the fact that it was reprinted four times during this period.

Aureomycin, chloramphenicol, and Terramycin have been added to the antibiotics chapter. Two new chapters have been added to the section on anti-infective drugs, i.e., one on "The Chemotherapy of Tuberculosis" with discussions of streptomycin, para-aminosalicylic acid, the sulfones (Promin, Diasone, and Promizole), and the thiosemicarbazones (Tibione), and the other a short chapter entitled "The Chemotherapy of Rickettsial Diseases." A brief chapter, "Anti-motion Sickness Drugs," has been included, and is devoted mainly to Dramamine. There is also a new chapter on the drugs used in the treatment of arthritis, devoted chiefly to cortisone and ACTH. The second edition includes the changes incorporated in the fourteenth revision of the "U. S. Pharmacopeia," the ninth edition of the "National Formulary," and "New and Nonofficial Remedies, 1950."

All important new drugs have been included together with references to their pharmacology and clinical use. A feature which appealed especially to the reviewer is the preliminary brief physiological discussion which often precedes the pharmacological section and which greatly facilitates a rapid understanding of the action of the drugs discussed. A serious attempt has been made to indicate mechanism of action for each class of drug, even though our knowledge of the events occurring at the cellular and sub-cellular level of organization is unfortunately very meager. References are given to recent research on mechanism of action for those readers who wish to supplement the necessarily brief discussions in the text. A table is given at the end of each chapter which lists the official preparations and dosages, but no indication is given in these tables as to whether the preparations are U.S.P. or N.F.

The only error noted by the reviewer was a reference to ergotoxine as an alkaloid of ergot (p. 899), without any mention of the discovery of Stoll that "ergotoxine" is actually a mixture of the three alkaloids of ergocornine, ergocristine, and ergocryptine. The reviewer believes that the section entitled "Social Aspects of Alcohol" contains a few statements that might be omitted from such a textbook, e.g., "But even social drinking has many adverse effects upon society. Among these are lowering of moral standards . . ." The general validity of such a statement is certainly questionable, and tends to detract from the otherwise scholarly tone of the book.

This work is generally very well written and authoritative, and contains much information not available in other texts. It is highly recommended to the medical profession and students.

THE ETHICAL BASIS OF MEDICAL PRACTICE. By Willard L. Sperry, Dean of the Harvard Divinity School. Paul B. Hoeber, Inc., 49 East 33rd Street, New York, N. Y., 1950. $2.50.

When a doctor of divinity, eminent and respected in his chosen field, with a background of many years of helpful and constructive experience in ministering to the mental and spiritual needs of our patients, sees fit to analyze the philosophical basis for our art and science he deserves a thoughtful and attentive hearing.

"The Ethical Basis of Medical Practice" presents in a book of 178 pages divided into 14 chapters the careful and studied conclusions of the dean of the Harvard Divinity School, and comprises in essence the subject matter of two addresses given by the author, one to the students of Harvard Medical School and the other the Roger Morris Lecture for the academic year 1948-49 at the Medical School of the University of Michigan.

The first chapter, "Our Overlapping Professions," indicates Dean Sperry's belief that medicine and the ministry have much in common, and that rather than be antagonistic to or suspicious of each other the representatives of each profession should strive to work harmoniously together in the recognition that the sick individual is in sum a human being with need for spiritual guidance as well as for physical restoration.

In the second chapter, "The Specialist and the General Practitioner," some broad general advice is given to the medical student or intern in the determination of whether to follow general practice or to enter one of the specialties. The author indicates that the minister must have a broad general knowledge of philosophy as well as a keen understanding of human nature in all of its manifestations. The implication is that if he were to specialize in one particular field he would lose his value to serve best the needs of his parishioners. The author's indication of the type of medical student best suited for general practice, and of the one most likely to serve best as a specialist is objective and helpful.

As a basis for evaluating medical ethics, Chapter III, "The Nature of Conscience," deals with fundamentals in the definition of morals, ethics, and conscience.

In Chapter V, "Professions in General," the author begins by emphasizing the theoretical difference between professions and trades and insists on the fact that trades are conducted for profit and professions are organized for service. The question of medical fees, a limited reference to the English system of compulsory health insurance, and some excellent examples of the value of professional ethics to the public, make this chapter particularly valuable. In subsequent chapters, codes of medical ethics are analyzed, quotations from the American Medical Association presented, and historical background indicated. The American tradition of the immediacy and intimacy of the relationship between doctor and patient is expressed as one of the basic fundamentals. By comparison with the ethical codes of ministers and lawyers, the author accords first place to the physician's code and the manner in which he lives it and defends it.

Having laid an excellent philosophic background for the code of medical ethics, the author now addresses himself to specific applications of that code and the difficulties these applications entail.

In Chapter VII, "Our Tragic Moral Choices," are presented some excellent illustrations, one of which is the conflict in which the physician finds himself when an apparently incurable patient requires repeated transfusions of a rare type of blood and the hospital laboratory indicates this rare type of blood should not be wasted on the hopeless patient but should be reserved for use on others whose lives might be saved. After considerable discussion, the author concludes that the true physician must continue to give the transfusions regardless of the apparent hopelessness of the patient under treatment. In a subsequent chapter in elaboration of this conclusion he states that the diagnosis of incurability in this instance was in error, that ultimately the patient so treated did recover.

Chapters headed "Democratic vs. Totalitarian Medicine," "Telling the Truth to the Patient" and "The Prolongation of Life," elaborate the author's fundamental belief in the value and dignity of each individual life, and the basic duty of the physician to preserve and prolong that life and make it as comfortable and happy as possible under any and all circumstances. This basic philosophy prepares the reader for the next two chapters—"Euthanasia—Pro," and "Euthanasia—Con." In "Euthanasia—Pro," there is a definition of the doctrine followed by a brief historical background which includes reference to the Greek attitude and that of primitive societies. A short modern history of the euthanasian movement is given with particular reference to the literature as supplied by the Euthanasian Society of America. In Chapter XII, "Euthanasia—Con," the author honestly and forcefully states his position in opposition to these proposals. He indicates the complications and dangers that might beset society were such a law on the statute books. He cites the corruption of medical ethics in Nazi Germany and refers to Dr. Ivy's article portraying medical crimes as practiced under the Nazi regime. He indicates the basic error of that regime was that the economic welfare of the state was considered of greater importance than the care of the individual patient, and upon that philosophical error the morale of the medical profession disintegrated. He sees in this fact the basic fallacy in the euthanasia philosophy which is that there is such a thing as a life not worth living. As a minister, he contends that all life has value. As a logical consequence of the basic principles of the euthanasia movement he visualizes a social system in which doctors of the army and navy, for example, would go through our veterans' hospitals and cull out the physical and mental misfits in the interest of economic efficiency.

The entire work is well written, studiously presented, and carefully documented as to sources. It leaves the physician-reader with an increased respect for the life of every individual patient under his care and the desire so to practice his art that each patient may indeed receive the care and consideration to which he is entitled as an individual human being and not as a cog in a collectivist machine.

* * *

DIFFERENTIAL DIAGNOSIS OF INTERNAL DISEASES—Clinical Analysis and Synthesis of Symptoms and Signs. By Julius Bauer, M.D., F.A.C.P., Clinical Professor of Medicine, College of Medical Evangelists, Los Angeles. 866 pages. Grune and Stratton, New York, 1950. $12.00.

This large book on differential diagnosis demonstrates an exceedingly large fund of information and personal experiences on the part of the author. This is in keeping with what might be expected from his hospital and clinical background.

The unique feature of the book is the wealth of individual case reports with which the author documents the points that he wishes to emphasize in differential diagnosis. This is most useful and emphasizes the author's opinions in a way not possible with words alone. In the case reports and in the discussions, the author demonstrates a well-marked awareness of the importance of the emotions in disease and of psychosomatic correlations.

The author frequently refers to laboratory tests rather than to fine distinctions of symptoms or clinical course in

the differentiation of various disorders; this is the major criticism that the reviewer offers.

The book in general can be recommended as an interesting and personal discussion of differential diagnosis documented by case histories and reflecting largely continental opinion, although the American point of view is also presented.

* * *

HANDBOOK OF PEDIATRIC MEDICAL EMERGENCIES. By Adolph G. DeSanctis, M.D., Professor of Pediatrics, Postgraduate Medical School, New York University-Bellevue Medical Center; and Charles Varga, M.D., Instructor in Pediatrics, Postgraduate Medical School, New York University-Bellevue Medical Center. 51 illustrations. The C. V. Mosby Company, St. Louis, 1951. 284 pages. $5.00.

This book had its beginning as a guide to the resident staff of the hospitals with which Dr. DeSanctis is associated and as a compendium for use in the pediatric courses of the Postgraduate Medical School. In these capacities it underwent several revisions, culminating in a privately printed edition.

The present volume is the outgrowth of this earlier material. It is therefore better organized and more complete than might be the case were it an initial effort of the authors.

There is a chapter each devoted to cardiovascular, gastrointestinal, genito-urinary, neurological, and respiratory emergencies. There is also a chapter each on drowning, poisoning, care of the premature infant, and miscellaneous emergencies.

The final chapter is an illustrated one on pediatric procedures. The book completely fulfills the purpose for which it was written and should be useful to pediatricians and others seeing infants and children in their practice.

* * *

PRINCIPLES AND PRACTICE OF OBSTETRICS—10th Edition. By J. P. Greenhill, M.D., Attending Obstetrician and Gynecologist, the Michael Reese Hospital; Obstetrician and Gynecologist, Associate Staff, the Chicago Lying-In Hospital; Professor of Gynecology, Cook County Graduate School of Medicine. (Originally by Joseph B. DeLee.) 1,140 illustrations, 194 in color. W. B. Saunders Company, Philadelphia, 1951. 1,020 pages. $12.00.

In this tenth edition of DeLee's "Obstetrics" Greenhill appears for the first time as the sole author, although DeLee's name still is retained on the back of the cover, beneath that of Greenhill. On the title page it is noted that the text originally was written by Joseph B. DeLee but he is not otherwise identified except in the last line of the preface, where he is called "one of the greatest obstetricians of all time." When it is time for the next edition of this important work, the author and publishers might consider including a brief biographical sketch of DeLee, at least to the extent of a paragraph in the preface, because by then the book will be read by many with no first-hand knowledge of how obstetrics blossomed in the Chicago area early in the twentieth century under this master's leadership.

It is regrettable that Greenhill has permitted the size of the new edition to exceed that of its predecessor by some nine pages instead of making a drastic cut in total bulk. While it is true that many deletions have been made, the gaps have been more than filled by new material. The author states that he has "practically rewritten the entire book" and that "not a single page remains as it was." In a way this is true, but only in the sense that the material has been physically rearranged with respect to positioning on the various pages. Obviously the major portion of the text has not been changed because obstetrical practice is not appreciably different from what it was in 1947. A glance at the table of contents would suggest drastic changes in the new edition but one soon discovers that this results merely from the extirpation of fifty per cent of the "section" numbers and two of the chapter numbers. There has been a certain amount of amalgamation of old chapter headings, as well as the insertion of two new chapters, one by Helene Deutsch dealing with the psychology of pregnancy and one to accommodate vomiting of pregnancy, the discussion of which logically has been removed from the chapter on toxemias. The format of the table of contents has been improved greatly by better spacing and more attractive type, and throughout the book there are evidences of increased spacing between words so that the pages appear less crowded.

All of the recent advances in obstetric thinking and practice appear to have been included, and certainly this volume continues to merit its position as one of the most popular American reference works on obstetrics. There would seem to be little need to say more about a book which has been a best-seller for almost 40 years.

* * *

THERAPY OF DERMATOLOGIC DISORDERS—Including a Guide to Diagnosis and a Dermatologic Pharmacopeia. By Samuel M. Peck, M.D., Dermatologist to the Mount Sinai Hospital; Associate Clinical Professor of Dermatology, Columbia University; and George Klein, M.D., Assistant Clinical Professor of Dermatology, New York Medical College. Lea and Febiger, Philadelphia, 1951. 383 pages. $6.50.

A unique approach to the treatment of skin disorders that is of great value to both the general physician and the dermatologist.

An unusual feature of the book, particularly helpful to the non-specialist, consists of topographical charts showing, by means of a code, the skin disorders most commonly seen in any given location. After referring to the code and the indicated diagnosis the reader will find a concise description of the disease and its treatment.

The dermatologist will be more interested in the last third of the book which is an excellent dermatologic pharmacopeia. Practically all of the drugs, both old and new, which are used in treating dermatologic disorders are discussed as to origin, action and use. Many valuable prescriptions are given.

A separate chapter by William Leifer briefly summarizes the diagnosis and treatment of venereal diseases.

This book is a valuable aid to anyone interested in the dermatoses.

* * *

REVIEW OF PHYSIOLOGICAL CHEMISTRY. By Harold A. Harper, Ph.D., Professor of Biology, University of San Francisco, Lecturer in Surgery, University of California School of Medicine. Third Edition. University Medical Publishers, P.O. Box 761, Palo Alto. 260 pages. $3.50.

This small and economically published book fulfills the author's stated intentions in that it concisely presents fundamentals of physiological chemistry with attention to their application to medicine. Controversial topics and certain very recent advances have been avoided altogether or noted but briefly. The field is satisfactorily reviewed.

* * *

Correction:

The price of "Atlas of Human Anatomy," Volumes I and II, by M. W. Woerdeman, published by the Blakiston Company, Philadelphia, is $5.50 per volume and $11 per set. In the notice accompanying the review published in the August issue of CALIFORNIA MEDICINE, the price was given incorrectly as $10 per volume, $18 per set.

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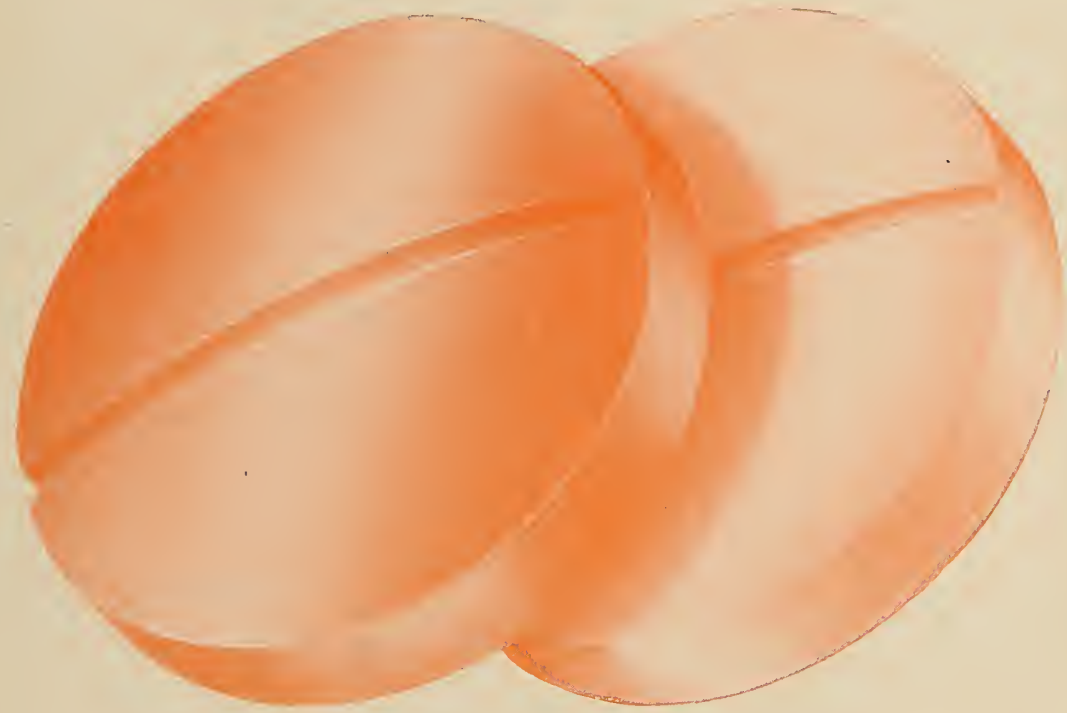

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*Editorial: Promise in Peptic Ulcer, West. J. Surg. *58*:445 (Aug.) 1950.

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SEARLE RESEARCH IN THE SERVICE OF MEDICINE

Head Pain as a Diagnostic Aid

Frequently the presence of head pain is overlooked. The physician learns of it only if he has made an effort to elicit the information. Etiology is the key to rational management. The patient should be warned against taking medication before diagnosis.

Friedman deplores the regrettable tendency to call any chronic recurring headache migraine. Thoroughgoing history-taking and full physical and neurological examination are essential for accurate diagnosis. The following chart gives briefly the primary diagnostic leads and therapy for some common types of headaches.

Etiology of Headache	Primary Diagnostic Data	Primary Therapy
Inflammatory e.g., Meningitis Abscess	Inflammation of intracranial structures; fever; leucocytosis; bacteriologic diag.	Specific: sulfonamides and antibiotics. Symptomatic: analgesics.
Tumor	Pain varies as spinal press. changes; skull X-ray.	Specific: surgery. Symptomatic, analgesics, &/or hypnotics.
Sinusitis	Sinus congestion and infection; cloudy X-ray.	Specific: antibiotics and drainage. Symptomatic: analgesics.
Hypertensive	Hypertension present but pain not related to b.p. level; Dihydroergotamine. relieves pain.	General hypertension therapy; sedation. Symptomatic: analgesics.
Migraine & other vascular headaches	Headache: recurrent, intense, throbbing. No organic causation; migraine in family; patient; energetic, perfectionist. Visual prodromata; g-i. upset during headache.	To abort attack: oral ergotamine plus caffeine — Cafergot (dosage given below) General: adjustment to minimize nervous stress.

Data tabulated is from: Wolf, G. Jr.: Pennsylvania M. J. 54: 25, 1951. Friedman, A. P., in Conn, H. T.: Current Therapy, 1950, Phila., Saunders Co., 1950, p. 563.

Acute Migraine Attack Therapy: Numerous clinical studies have reported effective oral treatment with Cafergot® tablets (ergotamine tartrate 1 mg. plus caffeine 100 mg.). Reeves says Cafergot affords ". . . predictable response, economy, flexibility, oral administration and absence of notable side effects." Proper dosage procedure is important. Failures in true migraine result from inadequate or delayed dosage.

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KOREAN WOUNDED HAS BETTER CHANCE THAN VICTIM OF CIVILIAN ACCIDENT

A wounded member of the United Nations in Korea entering a military hospital has a better chance of survival than a civilian accident victim who is taken to a large municipal hospital.

This is the opinion of Major General Edgar Erskine Hume, chief medical officer of the United Nations Forces in Korea.

Writing in a recent issue of the *Journal of the American Medical Association,* General Hume said deaths among hospitalized service men in Korea have run at about half of the record low rate in World War II. In that war, about 955 out of every 1,000 men brought to a military hospital lived, whereas the Korean survival rate has risen to 975, he said.

"Municipal hospitals in large cities, those that care for the victims of ordinary accidents due to traffic, industry and the like, can hardly match these figures," he added.

He pointed out that this record has been attained despite the difficulties incident to administering a medical service to soldiers, sailors and airmen of more than a score of nations, with different languages, diets and religions.

"One must see the smoothness with which this united medical service functions to believe it possible," General Hume said. "We make no distinction in our hospitals as to the nationality, race, rank or religion of our patients. They are separated solely on the basis of their clinical condition. Not once has there been any difficulty or complaint regarding this policy. No physician, civil or military, can be other than satisfied to see a general in the bed next to a private, a Frenchman beside a Filipino, or a Negro in a bed adjoining that of a man of some other race. We hold that nowhere is the spirit animating the United Nations more manifest. When requested, we provide special food for those whose dietary rules or national usage specifies a particular diet. And even this has caused us but small difficulty.

"The manner in which our blood bank functions is a splendid example of the good consequences of good cooperation. While we regularly receive the bulk of our blood stocks by airplane from the United States, all and sundry people in Tokyo and other Japanese centers contribute their blood generously. The American Red Cross has effectively attended to much of the administrative detail in all this.

"There have been many military medical advances growing out of our experience in Korea. We have found that the helicopter is a wondrous saver of lives. These aircraft are attached to mobile army surgical hospitals, our most forward hospital units, in which women nurses are on duty. Upon call from the aid stations in the area of actual combat, the helicopter is sent forthwith to bring back the wounded man. Thus, in a matter of minutes rather than hours the patient is brought into a hospital where he may receive operative care. I have repeatedly decorated men in a hospital within one hour from the moment they were wounded.

(Continued on Page 54)

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(Continued from Front Advertising Section, Page 46)

Bureau of Labor Statistics, was only one of the three major factors responsible for the increase in the average incomes of physicians which has enabled physicians' incomes to keep pace with the inflationary trend of the 1940's. The other two major factors were improved collections of fees and the increased 'output per physician.'

"6. In addition to these three specific factors, the increase in the number of physicians since the base period must be considered. If there had been the nationwide shortage of physicians in 1949 which some writers have alleged, it is almost certain that physicians' incomes would have been, on the average, far higher and the increases in recent years far greater."

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KOREAN WOUNDED HAS BETTER CHANCE THAN VICTIM OF CIVILIAN ACCIDENT

(Continued from Page 50)

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(Continued on Page 68)

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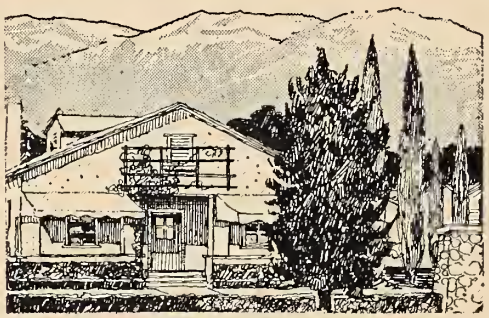

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WASHINGTON NEWS

Details of Aged Hospitalization Plan Proposed by Administration. (Note: This is a condensed statement of facts and arguments advanced by FSA Administrator Oscar Ewing. No attempt is made in these pages to appraise the suggestion. This is merely a report on what the plan contains and on his explanation.) Mr. Ewing, with administration support, has proposed a system of hospitalization for the aged and certain dependent groups. At this writing drafting of the bill has not been completed, but it likely will be introduced soon. Following are the main provisions:

Persons Covered: All persons 65 and over (and their dependents) who are entitled to social security cash benefits, regardless of whether they actually are recciving benefits; widows under 65 with dependent children; any other survivors who are eligible for SS benefits under existing law.

Benefits: Sixty days hospital service in any one year; hospitals to be paid for services, drugs and appliances which the hospital customarily furnishes to its bed patients; specifically excluded are (1) medical care, except that generally furnished as an essential part of hospital care for bed patients, and (2) semi-private accommodations, unless the beneficiary himself is willing to pay the difference.

Limitations: While FSA would regard this hospitalization as the insured right of eligibles, not all could be taken care of. Because of wide variations in the rate of hospital occupancy, potential beneficiaries in certain areas would find it difficult, if not impossible, to obtain the service. Mr. Ewing explains that on the national average, hospitals are 71 or 72 per cent occupied, whereas 85 per cent is considered the practical maximum. In theory, beneficiaries would have access to this 13 or 14 per cent not now occupied. Also, the program would not cover tuberculosis or mental patients, nor most chronic patients. Mr. Ewing said a chronic patient would be eligible if his condition became acute. However, he said specifically that rest homes and domiciliary homes could not participate.

Administration: At national level, the Federal Security Administrator or his agent would set policy; the Federal Hospital Council (of Hill-Burton program) would advise him, but would not have veto power. State health departments would be encouraged to handle the program and work out contracts with hospitals, but if a state declined to participate, individual hospitals would be authorized to deal directly with FSA. State-licensed hospitals would be eligible; if the state did not license, a participating hospital would have to meet standards set by FSA, in consultation with Federal Hospital Council. Mr. Ewing said provision would be made to keep patient records confidential, and to insure that the federal government would not control hospitals or participate in their policy-making.

Financing: The program would be financed by what Mr. Ewing describes as surplus in current social security collections from employers and em-

(Continued on Page 69)

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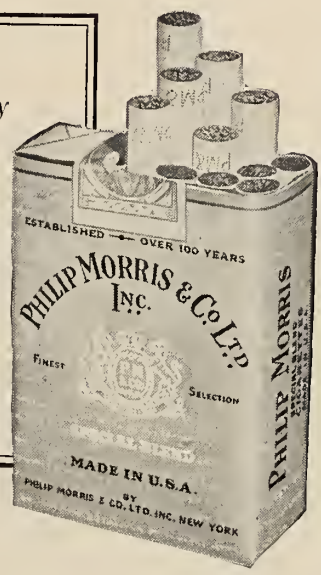

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KOREAN WOUNDED HAS BETTER CHANCE THAN VICTIM OF CIVILIAN ACCIDENT

(Continued from Page 54)

patients from point to point in Korea where such mode of travel is indicated.

"Never before has there been a war in which the wounded could be so speedily and effectively removed from the embattled country and taken to a land not at war."

General Hume said that while other nations have sent small medical groups along with their contingents, the medical service is dependent largely upon American personnel.

He also reported that disease, which once killed more soldiers than bullets, has been checked among the United Nations forces. This is not the situation among the enemy soldiers where a heavy death toll has been attributed to epidemics.

He said one of the few good features of this campaign is the opportunity for medical research, adding:

"Studies which in times of peace would require years may be completed in a matter of months, such being the tempo of the conflict. Much is quickly learned in clinical practice, also, in the fierce light of battle. All this is of great importance to youthful physicians drawn into the military service from peacetime professional pursuits of civil life. They have a wealth of clinical material and unrivaled opportunity to learn, and so when they return to their hospitals and other functions at home they will find themselves better qualified."

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WASHINGTON NEWS

(Continued from Page 60)

ployees. If, instead, these costs were to be assessed against payrolls, FSA experts estimate that the increase would be only 1/10 of one per cent on both employers and employees, an amount regarded by them as too small to justify the increase. Mr. Ewing said that this operation would not constitute use of funds legally earmarked or committed for other purposes. Total cost of the first year (probably 1953) is estimated at $200,000,000, figure arrived at in this manner: By that year, about 7,000,000 persons would be eligible (5.5 million over 65). FSA planners, who said they were using insurance statistics as well as their own public welfare records, said they estimated the average person over 65 years required about two and a quarter days of hospitalization each year, with eligible younger adults and children averaging between half a day and a day. The total of these patient days, multiplied by an assumed hospital cost of $15 per day, produced the $200,000,000 estimate for the first year. It is contemplated that a hospital's patient day cost will be determined by averaging out its costs for "administration, dietary, housekeeping, nursing, x-ray laboratory, etc., but excluding costs for outpatients, research, etc."

Certification: A patient would not be eligible for hospitalization until a physician had certified that this was necessary. It would be the responsibility of

(Continued on Page 74)

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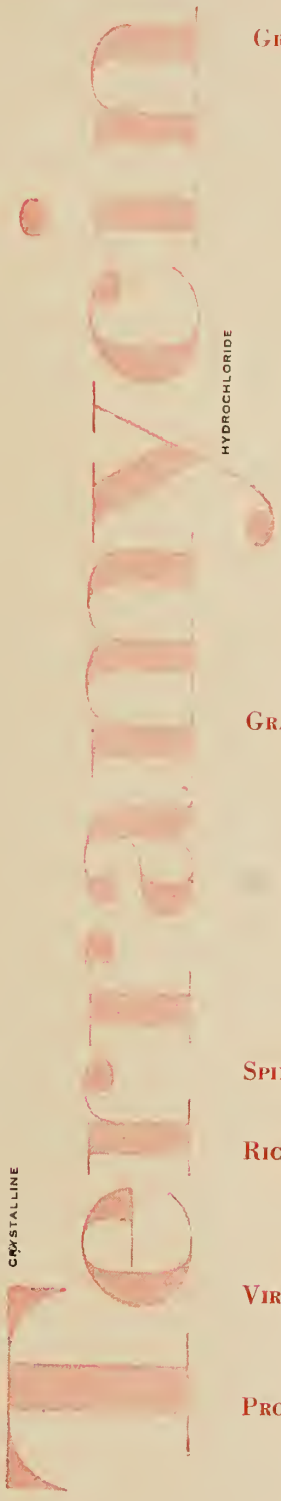

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Scarlet fever • Urinary tract infections
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Abscesses • Cellulitis
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Gram-negative Bacterial Infections

Gonorrhea • Brucellosis
Bacteremia and septicemia
Friedländer's pneumonia
Mixed bacterial pneumonias
Pertussis • Diffuse bronchopneumonia
Post-partum endometritis • Granuloma inguinale
Dysentery • Urinary tract infections
Respiratory tract infections
Cellulitis • Peritonitis • Tularemia

Spirochetal Infections

Syphilis • Yaws • Vincent's infection

Rickettsial Infections

Epidemic typhus • Murine typhus
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WASHINGTON NEWS

(Continued from Page 69)

the physician to decide when a chronic case, ineligible for hospitalization, became an acute case, and therefore eligible. Under the plan, the physician himself would make arrangements for placing the patient in a hospital if space could be found.

Administration Arguments in Favor of Plan: Sponsors emphasize that this plan would provide a form of hospitalization for groups of people least able to obtain non-government hospitalization (the aged) as well as those least able to afford such coverage (widows and dependents). Furthermore, they point out that this would mean a reduction in federal, state and local public welfare contributions. Mr. Ewing said, "Benefit checks (at current rate) cannot be stretched to cover unpredictable and heavy expense of illness requiring hospitalization." He cited several spot-check surveys of cities as evidence, including one which found that less than three-fifths of old age assistance beneficiaries were able to pay their expenses from their own resources when hospitalized. The sponsors report that only about 10 to 15 per cent of the people over 65 have hospitalization insurance and believe that "even if voluntary hospitalization insurance were more readily available to older persons, limitations on the benefits — largely unavoidable in such policies —

(Continued on Page 94)

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MANUFACTURERS OF ETHICAL PHARMACEUTICALS SINCE 1927

WASHINGTON NEWS

(Continued from Page 74)

would discourage their purchase because such limitations greatly reduce the adequacy of the protection."

Sponsorship: The plan has been under preparation for many months, with a number of outsiders, including some labor leaders, advising and assisting FSA officials. Mr. Ewing said at his press conference that he had also consulted with officials of the American Hospital Association and the Catholic Hospital Association. He did not say, however, that these groups supported the idea. Mr. Ewing said he had talked it over with a number of Senators and Congressmen before making the plan public officially. Asked if he thought there would be opposition, Mr. Ewing said, "I can't conceive that anyone with a heart would oppose this. This is something they will have paid for themselves in insurance.... I can't believe doctors don't want sick people to have attention."

Physicians' Help Asked in Halting Use of Nostrum. USFDA is asking help of physicians in warning diabetics against a remedy being mailed into this country from Mexico, which FDA describes as "worthless and extremely dangerous if employed as a substitute for insulin."

It is advertised as Cacalla Composita, Mexican Indian Root, and is being offered by "Mexican Indian Root Co., Mexico City," under the name of Dr. Miguel C. Martinez, general manager.

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Relationship of Stress to Autonomic Lability

Studies in psychosomatics have shown that functional disorders often are a result of the patient's inability to adjust to emotionally stressful situations (stressor factors).

Nervous tension and chronic anxiety, discharged through a labile Autonomic Nervous System, can cause somatic disturbance. [1,2] Such states may involve any one of the organ systems or several at one time. [1,3] The outline below relates gastrointestinal and cardiovascular symptomatology to the exaggerated response of the autonomic nervous system.

	Physiologic Effects of Autonomic Discharge	
	Sympathetic	Parasympathetic
Gastro-intestinal	Hypomotility Intestinal Atony Hyposecretion Reduced salivation	Hypermotility Gastrointestinal spasm Hypersecretion
Cardio-vascular	Rapid heart rate Peripheral vaso-constriction	Slow heart rate Vasodilatation
Functional Manifesta-tions	Palpitation Tachycardia Elevated B. P. Dry mouth—throat	Heartburn Nausea-vomiting Low B. P. Colonic spasm

Data here tabulated is from references [3,4,5,6,7], given below.

Diagnosis of functional disorder is supported by the following indications of autonomic lability:

Variable Blood Pressure
Body Temperature Variations
Changing pulse rate
Deviations in B. M. R.
Exaggerated Cold Pressure Reflex
Glucose Tolerance Alterations

Therapy in these cases is directed toward: 1) relief of symptoms by drug therapy (so making the patient more amenable to psychotherapy); 2) psychotherapeutic guidance in making adjustment to stressful situations and correction of unhealthy attitudes.

Clinicians who have studied these disorders, including those of the menopause, report that good therapeutic results are produced by combined adrenergic (ergotamine) and cholinergic blockade (Bellafoline) with central sedation (phenobarbital) [8,9,10]. A convenient preparation of this nature is available in the form of Bellergal Tablets. Functional disorders are long-term therapeutic problems; therefore, drug treatment by the following method is recommended: 5 or 6 tabs. per day for the 1st week; then gradually reduce to the smallest dose effective in maintaining the patient symptom free (average: 3 tabs. daily). Interrupt for 1 week out of every month to assess results.

1. Ebaugh, F.: Postgrad. Med. *4:* 208, 1948. 2. Wilbur, D.: J.A.M.A. *141:* 1199, 1949. 3. Williams, E. and Carmichael, C.: J. Nat'l. Med. Assoc. *42:* 32, 1950. 4. Goodman, L. and Gilman, A.: The Pharmacological Basis of Therapeutics, The Macmillan Co., 1941. 5. Katz, L. et al: Ann. Int. Med. *27:* 261, 1947. 6. Weiss, E. et al: Am. J. Psychiat. *107:* 264, 1950. 7. Alvarez, W.: Chicago Med. Soc. Bulletin, 581 1950. 8. Rakoff, A.: A Course in Practical Therapeutics, Williams and Wilkins, 1948. 9. Karnosh, L. and Zucker, E.: A Handbook of Psychiatry, C. V. Mosby Co., 1945. 10. Harris, L.: Canad. M.A.J. *58:* 251, 1948.

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REPORT ANTICOAGULANT DRUGS EFFECTIVE IN SEVERE FROSTBITE

The use of anticoagulants has produced "gratifying results" in severe frostbite cases, according to records of the Cook County Hospital, Chicago.

A report on the experience with the use of bishydroxycoumarin (trade name Dicumarol) and heparin sodium was made in a recent issue of the *Journal of the American Medical Association* by Drs. Frank V. Theis, William R. O'Connor and Frederick J. Wahl. They are associated with the Hektoen Institute for Medical Research, the department of surgery of Cook County Hospital, and the Presbyterian Hospital, Chicago.

"Fourteen of the 30 patients with acute frostbite admitted to Cook County Hospital during the winters of 1949 and 1950 were treated with anticoagulants," they reported. "The results were most gratifying, as only one of the treated patients required local amputation of a finger. The duration of hospitalization has been appreciably reduced, and the patients returned to normal activities more quickly."

The anticoagulant therapy was instituted within one to two hours after the admission of the patients. The routine treatment employed previously was continued. Accompanying treatment consisted of blood and plasma infusions to combat shock, thawing of the involved areas by exposure to room temperature only, cleansing and application of sterile dry or petrolatum gauze pressure dressings and the use of penicillin to combat infection.

In thawing at room temperature, with no additional heat and no cooling, the medical procedure is contrary to the popular lay conception that frostbite should be treated by "rubbing on snow."

The technique took advantage of knowledge gained by experimental investigations of frostbite injury during the last war. These studies showed that anticoagulants in acute frostbite prevented the development of clots in the interspaces of tissue and the resultant gangrene.

Since the gangrene appears to be due to clotted red cells, the Chicago doctors stressed the early use of the anticoagulant therapy to interrupt the chain of events. The Cook County Hospital patients given the treatment were exposed not more than 16 hours before. Where gangrene or necrosis of tissue already had developed, it was obvious that anticoagulants would be of no value, they pointed out.

The average period of hospitalization was 42 days and the longest 270 days. Many patients who were not treated with the anticoagulant drugs required hospitalization for eight months to a year or more.

The worst case was that of a Negro, 50, who was brought into the hospital in an unconscious condition after a prolonged exposure to cold. He had been under the influence of alcohol and had slept for about eight hours in a gangway when the temperature was about 10 degrees. Hands and feet were "ice cold," stiff and solid to touch. Blood pressure was unobtainable and heart beat was weak. The rectal temperature was too low to be recorded on a clinical thermometer.

(Continued on Page 14)

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PHYSIOLOGIC THERAPEUTICS THROUGH BIORESEARCH

REPORT ANTICOAGULANT DRUGS EFFECTIVE IN SEVERE FROSTBITE

(Continued from Page 10)

The patient was put on the new therapy. Except for a low-grade fever that occasionally rose to 103 degrees, the patient made a surprising recovery, the doctors reported. He regained consciousness in eight hours. Only the right fifth finger required amputation although all fingernails and toenails came off. The long hospitalization was due largely to the physiotherapy treatment required for fibrous tissue formation in the extremities.

"It is impossible to predict the extent of gangrene and necrosis that would have developed if anticoagulant therapy had not been used," the report said. "However, from our previous experience and from our observation of patients who were admitted too late for anticoagulant therapy to be used, it could be assumed that both hands and both feet would have become gangrenous and required amputation."

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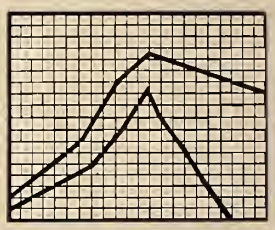

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References

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SAYS SAVING PREMATURE CHILD IS MEDICAL PROGRAM "IN HIGH GEAR"

The saving of the lives of prematurely born infants "is a medical care program in high gear," according to Dr. Leona Baumgartner, assistant commissioner for maternal and child health services, New York City Department of Health.

Writing in a recent issue of the *Journal of the American Medical Association*, Dr. Baumgartner said that in cutting down the infant deaths from 10 per cent of live births in 1915 to 3 per cent currently, many of the earlier principal causes of death have been removed, leaving prematurity as the main cause.

She pointed out that prematurity was assigned as the chief factor in 41,000 deaths in the United States in 1947 and that New York records show the mortality of babies weighing less than 5½ pounds (a common measure of prematurity) was 13 times that of babies weighing more than 5½ pounds.

"Although different states are attacking this problem in different ways, a basic pattern is beginning to emerge," she said. "Most activities are guided in part by state and local health departments, and are financed in part by the federal grants-in-aid programs provided for under the maternal and child health provisions of the Social Security Act.

"Usually included are such activities as:

"1. Training of nurses and physicians in the care of premature infants. This is a widespread activity.

(Continued on Page 22)

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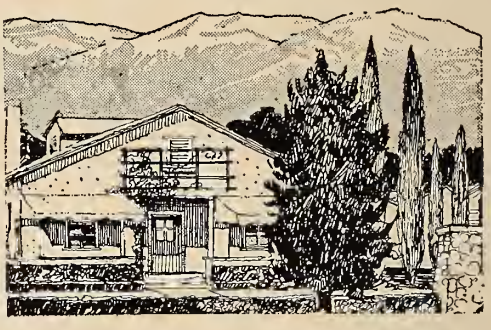

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C. E. Atkinson, M.D., *Medical Director*

Another report* of 'Resodec' therapy in a congestive heart failure case

(average reading time: 2 minutes)

"NAME: Patient E.R.C. HISTORY No.: 50946

AGE: 67 – Male

DIAGNOSES: Hypertensive heart disease, cardiac enlargement, auricular fibrillation, and intermittent congestive heart failure, questionable rheumatic heart disease with mitral insufficiency co-existing."

RESULTS: "In retrospect this patient has obviously benefited from 'Resodec' supplementing his low-sodium diet. In spite of digitalization, salt restriction, and frequent injections of mercurial diuretics between January of 1945 and May of 1950, he had had difficulty in remaining compensated, had not been able to work, and had been dyspneic and edematous during most of this period.

"Since the second week of 'Resodec' therapy, however, he has required no further mercurial diuretics, and following the sixth week of resin therapy his digitalis was reduced from .9 to .7 weekly. After losing his edema over an initial three-week period, his weight has remained fairly constant at about 145 pounds. His blood pressure has been reduced somewhat, particularly the diastolic....

"He has felt much better during this period of therapy, has been able to do light work about his house, and resume activity which was previously denied him. This patient is particularly enthusiastic regarding 'Resodec' therapy and wishes to continue it indefinitely. He has noted no side effects to the 'Resodec' therapy and has not found it unpleasant to taste....

"He is at present on an intake of 450 mg. of sodium daily, calcium gluconate, two teaspoonfuls twice daily, 'Resodec' 45 Gm. daily, digitoxin .1 mg. daily, and no other medication."

*Excerpts from an actual case history, as reported from a leading medical institution.

SAYS SAVING PREMATURE CHILD IS MEDICAL PROGRAM "IN HIGH GEAR"

(Continued from Page 18)

"2. Development of hospital standards and licensing, emphasizing facilities and personnel for proper care of premature infants.

"3. Consultation to hospitals (principally by nursing consultants so far) in an effort to raise the standards of care for full-term as well as premature infants.

"4. Loan of incubators, together with consultation regarding their use.

"5. Transportation of premature infants to premature infant centers.

"6. Development of premature infant centers and purchase of hospital care for them.

"7. Measures designed to prevent premature labor, such as more and better prenatal services, with emphasis on diagnosis and the importance of adequate nutrition; obstetric consultation for complications during pregnancy; hospitalization for complicated pregnancy; and obstetric consultation aimed toward improving the management of the mother's labor and delivery in cases of premature birth (since most of the premature infant deaths occur on the first day of life)."

Dr. Baumgartner said that health departments in many states are awaiting additional funds to develop

(Continued on Page 32)

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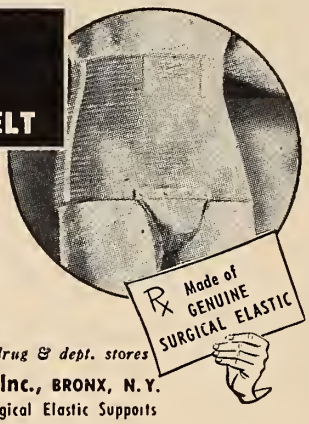

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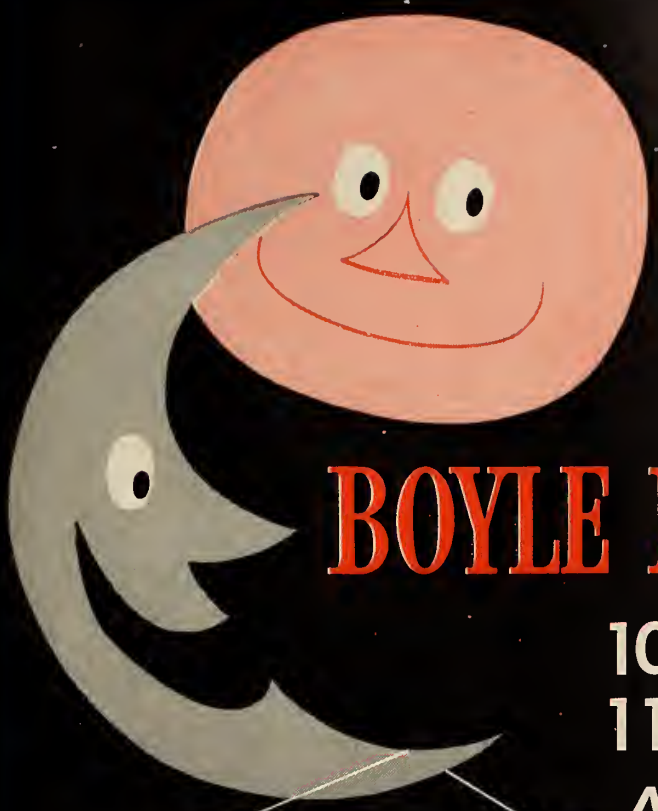

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A.M.A. SECRETARY'S LETTER

Socialized medicine evidently is far from being a dead fish on the beach!

William Green, president of the American Federation of Labor, has just issued a strong appeal to "all our 8,000,000 members and their families" to contribute to the Committee for the Nation's Health.

Now that Oscar Ewing's prodigious propaganda machine in behalf of socialized medicine has been stalled by Congress, at least temporarily, Mr. Green has taken up the cudgel and, as honorary vice-chairman of the Committee for the Nation's Health, is going to run full-steam ahead.

In a full-page appeal in the A. F. of L. publication, *The American Federalist*, Mr. Green addressed this message to all members:

"At the Houston convention last September, we of the American Federation of Labor pledged ourselves to a continued fight for national health insurance, disability insurance and federal aid to train more doctors and strengthen local public health departments.

"Determined to block these necessary and desirable measures, the American Medical Association has been spending millions of dollars in the last two years. The medical lobby is a spearhead of the reactionary forces.

"We of the American Federation of Labor are determined to preserve and extend our hard-won gains in social security, health and welfare. In this important activity our invaluable ally is the Committee for the Nation's Health, a group of distinguished physicians and laymen. The Committee for the Nation's Health is working hard to aid the American Federation of Labor and Labor's League for Political Education to build the solid educational base for a mandate to achieve labor's health goals.

"Every contribution to the Committee for the Nation's Health will help defeat the medical lobby's lies at the grass roots. Your contribution—large or small — to this committee will pay off in better health and welfare legislation for all our 8,000,000 members and their families."

Incidentally, he said the checks should be made payable to the Committee for the Nation's Health and sent directly to "President Green."

Whitaker & Baxter on June 30 informed the National Campaign Committee and members of the Board of Trustees of Green's letter, apprising them of its contents.

Now, A.M.A. President John W. Cline and Dr. Elmer L. Henderson, chairman of the Campaign Coordinating Committee, have just sent a follow-up memorandum to all state and county medical societies, stating that "in view of this new drive to establish socialized medicine, it is encouraging to note that the demand for the views of labor leaders opposed to compulsory health insurance is increasing." Continuing, their memo said:

"The orders, both from labor and non-labor sources, for reprints of 'Socialized Medicine Is No Bargain,' by William L. Hutcheson, general president of the United Brotherhood of Carpenters and Joiners of America and vice-president of the A. F. of L., and 'Government Medicine—Danger Ahead,' by Dave Beck, executive vice-president of the International Brotherhood of Teamsters, are on the increase.

"This is strong indication that the rank and file of working people are becoming aware that nationalizing the medical profession would not give them better, cheaper medical care, but only politically-controlled medical care.

"Considering the powerful new efforts toward socialization, it is important that the two labor pamphlets, carrying the factual story by responsible labor leaders, have the widest possible circulation. They are available in quantity at this office [Whitaker & Baxter]. The cooperation of every doctor, every Auxiliary member, every member of an allied profession, in this important work, is imperative at this time.

"Every medical society should make its own plans for distribution, and carry them out locally."

Enlist Support in Behalf of Ives Amendment. With the Senate finance committee deciding suddenly to consider the Ives amendment to the tax bill (H.R. 4473), we wired executive secretaries of all state societies to initiate whatever support they could in behalf of the amendment, which would eliminate discrimination against the self-employed in providing retirement benefits with tax deferred income.

Under existing federal tax laws, physicians who practice as individual proprietors or partners face certain tax inequities with respect to pensions. Therefore, favorable action on the Ives amendment is important to all physicians.

Telegrams to the state secretaries said in part:

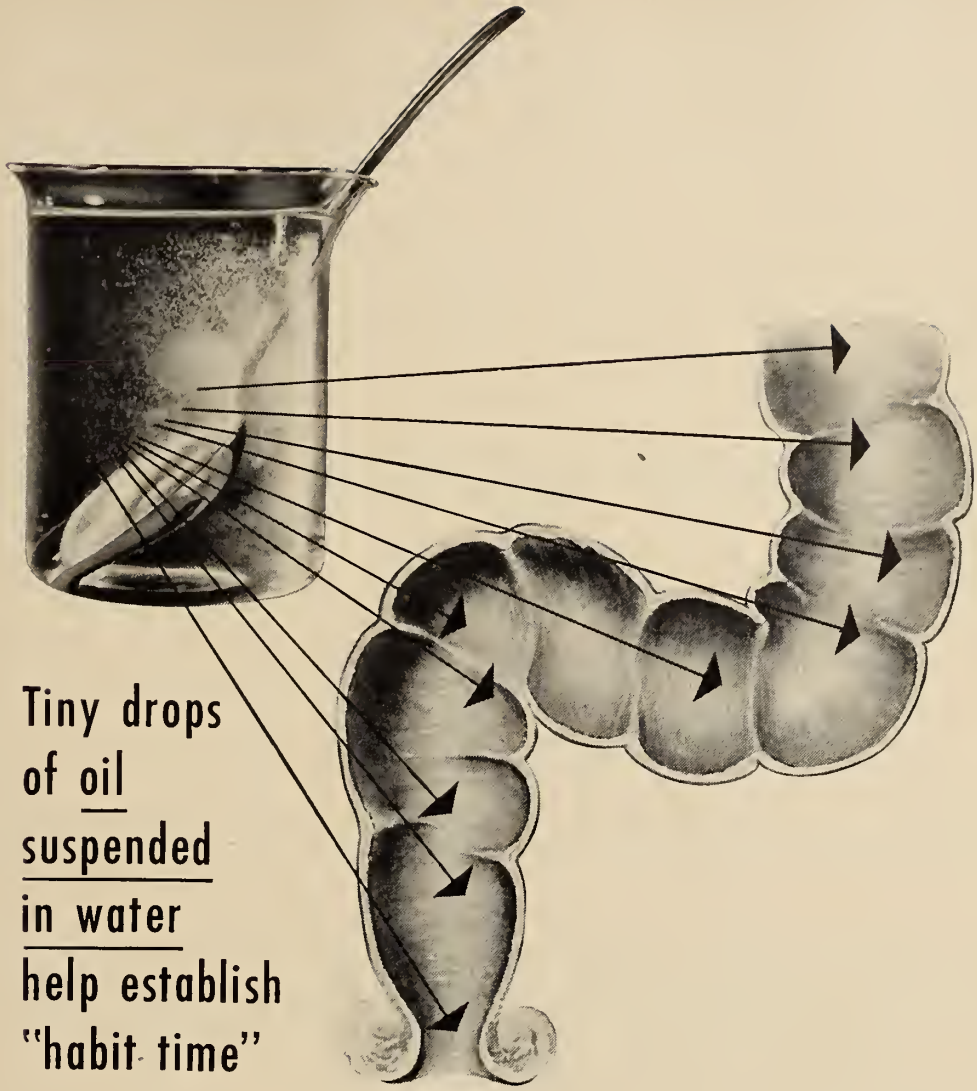
"This amendment will, it is believed, effectuate the recommendations of the House of Delegates at Atlantic City meeting in June. See A.M.A. *Journal* June 30, pages 849 and 850. Urge that you advise your senators of your position. We are asking for favorable consideration of Ives amendment as is also special committee of American Bar Association."

The A.M.A.'s position was explained in another telegram sent to Senator Walter F. George of Georgia, chairman of the Senate finance committee. Copies of the resolution considered by the House were air mailed to him.

Sections of the Federal Internal Revenue Code provide that a company can set aside funds under approved plans for employee pensions or shares in profit-sharing trusts which are deductible from the company's income as business expenses and, therefore, are not subject to income taxes. Yet, only physicians and other professional men who are employees — for example, company physicians and company lawyers—can receive the benefits of such pensions.

After a prolonged training period, the working lifetime of a physician is shortened and a considerable portion of his lifetime earnings is "bunched" into a relatively few peak earning years. During these peak earning years he is placed in a higher income tax bracket and hence pays more income

(Continued on Page 46)



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SAYS SAVING PREMATURE CHILD IS MEDICAL PROGRAM "IN HIGH GEAR"

(Continued from Page 22)

or expand programs for premature infants. She suggested an eight-point plan providing: (1) First-rate facilities, staffed with well-trained personnel; (2) consultation services to hospitals and doctors; (3) measures to prevent premature labor; (4) transportation for and payment of hospitalization costs of premature infants when necessary; (5) aid which may be needed by the general practitioner; (6) adequate care of the premature infant after discharge from the hospital; (7) continued evaluation of activities and results as well as continued education of the public to use available services; (8) teamwork in planning and operating the program.

PERSISTENT HOARSENESS MAY BE SIGN OF CANCER OF LARYNX

Beware of hoarseness which persists. It may be a sign of cancer of the larynx.

This warning was sounded by Drs. Herbert H. Harris and K. L. Wattleworth, associated with the department of otolaryngology at Baylor University College of Medicine, Houston, Texas.

Writing in the A.M.A. *Archives of Otolaryngology*, they reported on a study of 116 cases covering nearly every type of laryngeal tumor. Of these, 61 cases showed malignancy.

"The principal symptom of this [malignant] group was hoarseness, which was present six

(Continued on Page 33)

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PERSISTENT HOARSENESS MAY BE SIGN OF CANCER OF LARYNX

(Continued from Page 32)

months or longer in 35 cases," they said. "In 18 cases, the hoarseness was present for three months or less, while in eight cases there were no symptoms of hoarseness.

"Pain was a not too common symptom but was present in 20 cases from one to four months before admission of the patient to the hospital."

Surgery and x-ray, either singly or combined, were used in the treatment of the cancers. Those subjected to x-ray therapy had advanced malignant growths and many were in poor physical condition.

Of the 61 patients with malignant growths, 21 are alive without clinical evidence of recurrence, the Houston doctors said. They pointed out, however, that the survival period of those living ranged only from under one year to under four years. In the evaluation of cancer treatment, a general measure of success is survival for at least five years without recurrence.

They stressed the need for convincing the public of the importance of hoarseness, adding:

"Many of the 35 patients who had hoarseness six months or longer could have been spared the tragic end and much of the disabling treatment to which they were subjected. Many of these patients were seen late because of their ignorance of the importance of hoarseness."

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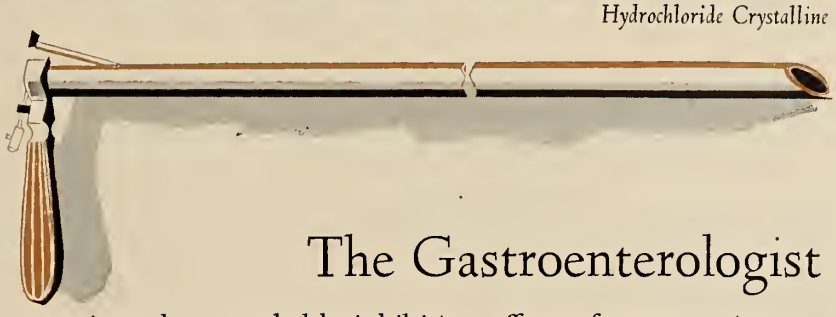

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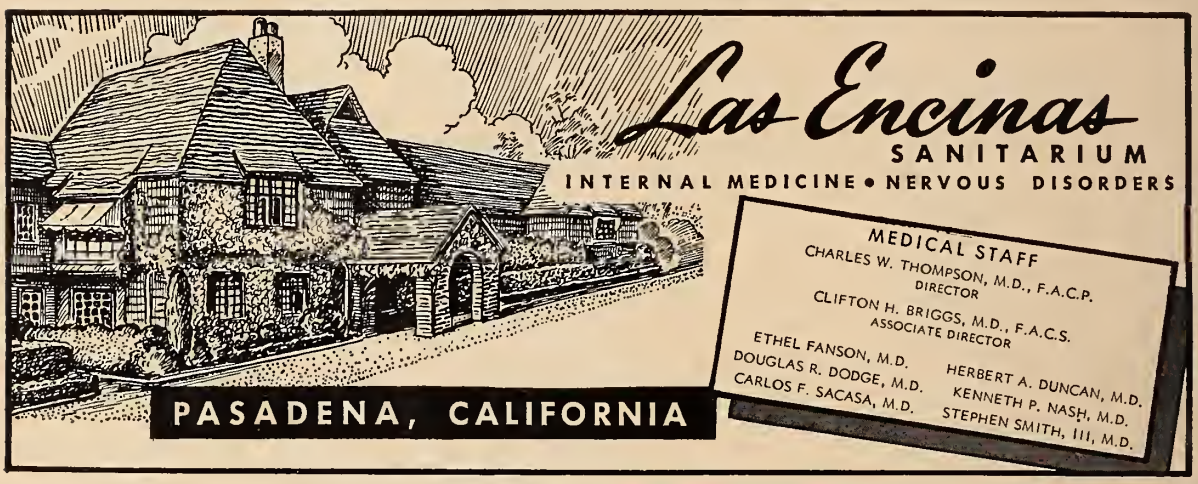
The publication also added that spectacular reductions were effected in South American countries following the spraying of dwellings. The results were obtained through the killing off of the mosquito principally responsible for the transmission of the disease.



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Labels on bottles containing ethylene dichloride, a commonly used chemical solvent of plastics, should contain a warning of its deadliness, according to an article in a recent issue of the *Journal of the American Medical Association.*

The chemical is used as a plastic cement by hobbyists as well as in industry.

Because of the habit of children swallowing unknown liquids when they are readily available, its poisonous nature should be indicated on containers, in the opinion of Drs. H. B. Lochhead and Henry P. Close of Coatesville, Pa.

They described the death of a mental patient in the Veterans Administration Hospital there. The patient obtained a bottle of plastic cement in the occupational therapy shop of the hospital and drank it. Despite intensive emergency treatment, he died in about 10 hours.

"The toxicity of ethylene dichloride and similar plastic solvents apparently is not well recognized by workers in plastics, particularly at the occupational therapy and hobby level," they said.

"Unfortunately, in our own instance the product was delivered from the jobber with a plain label bearing only the jobber's name and the name of the chemical. No warning of any kind appeared on the label to indicate the toxicity of the product."

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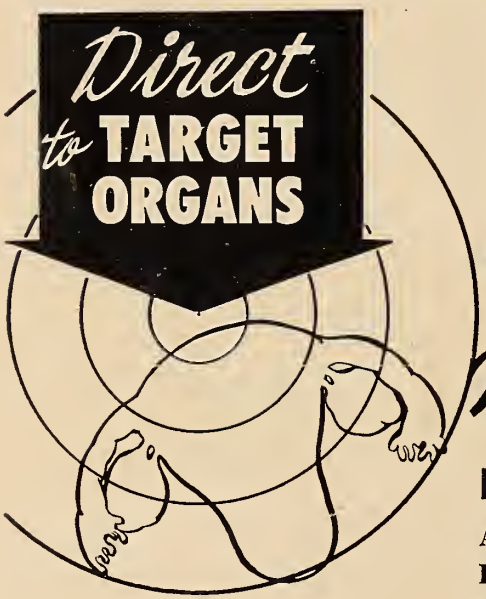

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A.M.A. SECRETARY'S LETTER

(Continued from Page 26)

taxes during his lifetime than another person who receives the same lifetime income spread more evenly over a greater number of years. Thus, the question of pensions for physicians acting as individual proprietors and partners is particularly perplexing for them because of the unusual economic pattern of their professional lives.

Faithful Doctors vs. British Bureaucracy. It is hard sometimes for American doctors to fully understand what British physicians are going through in trying to practice under the British National Health Act.

I have just received a lengthy and interesting letter from a London doctor, who tells how a group of faithful and determined medics had the guts to stand up and fight—but in the end lost, only to try again. Here's the story:

A group of British doctors is now trying to raise funds to establish a new independent hospital because their old hospital has been taken over by the government under nationalization and turned into a "gynecological unit."

The doctors claim that because of the present state of affairs, local inhabitants are being deprived of their family doctor relationship which, at one time, was a highly respected feature of British medicine.

Before nationalization, Great Britain was served by two kinds of hospitals—municipal, financed by local taxation, and voluntary, which were financed by the public. The latter were regarded as setting the standard for British hospital practice.

In 1948 the state took over both municipal and voluntary hospitals and set up 14 regional boards to administer them. For a time all went reasonably well. The hospitals continued to be run by the same personnel as before, but the regional boards eventually began to exercise their new powers to rearrange and alter the establishments entrusted to them.

Among the first hospitals affected was the little (voluntary) Victoria Hospital in Kingston-On-Thames, Surrey. This 44-bed unit was staffed by local doctors, who treated their own patients there under the supervision of a part-time team of specialists from London. It afforded an excellent service to the local people and, at the same time, enabled the doctors to keep themselves up-to-date by personal contact with specialists.

When, therefore, the regional board announced its intention of closing down the hospital, and using its building as a "gynecological unit" annex to a large hospital nearby, the staff and local population took every possible step to induce the board to change its mind.

When the order to close came, the doctors did not obey. They guarded their small hospital day and night to make sure it would not be "stormed." Meanwhile, every effort was made to get the decision overruled. There were petitions to Parliament, appeals by members of Parliament to the Minster of Health, local meetings and representations from the boroughs concerned, action by the British Medical Association and direct appeals and interviews with the new Minister of Health, Hilary Marquand.

Local doctors even took turns to picket the hospital to prevent the board from taking possession. In this way they succeeded in keeping the hospital open for six months longer.

But all their efforts, eventually, were of no avail and they were forced to close the hospital in June of this year.

As a sop, the doctors were offered a 20-bed chronic sick unit, discarded for hospital purposes in 1936. It has no sewage facilities on the ground floor, no running water in the wards, it has an inadequate operating theater, only a portable x-ray plant, no pathology, casualty or out-patient departments and no regular consultants. Thus the family doctors and their patients were deprived, not only of the facilities they had built up over 50 years, but of close association with consultants at the patient's bedside.

The Victoria doctors were so appalled by this prospect that, together with the local inhabitants, they set out to open a new, family-doctor hospital outside of the Health Service. Many British doctors admired the Kingston rebels for their stand, and are lending support. Lord Horder, the king's physician, has volunteered to be one of Victoria's consultants.

Lawyers in many sections of the country are beginning to awaken to the threats of "socialization of the practice of law."

The state bar of California, in a recent meeting, proposed a counteroffensive.

Meanwhile, the A.M.A. public relations firm, Whitaker & Baxter, has filled many requests for medicine's "Simplified Blueprint of Campaign" from more than a dozen bar associations. This should facilitate an even closer working relationship between medical societies and bar associations against the common threat of socialization.

State bar leaders in California said that pressures have been increasing for several years in behalf of programs giving government enlarged powers over various phases of legal practice. One of the avenues of attempted socialization, they said, is establishment of legal reference services under state or local governmental jurisdiction.

Bar members frankly admitted, according to an article in the San Francisco *Examiner*, that the persistent drive for socialized medicine, not only in California but nationally, has led the legal profession to take notice of its own vulnerability.

The California Bar took immediate steps to establish a lawyer reference service in each community. It was argued that this would solve the problem of many potential clients who do not know how to find a reputable lawyer—within the existing professional and economic framework.

Sincerely yours,

George F. Lull, M.D.,
Secretary and General Manager, A.M.A.

California MEDICINE

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VOL. 75 NOVEMBER 1951 No. 5

The Treatment of Craniocerebral Injuries and Prevention of Anoxia

JOHN E. ADAMS, M.D., *San Francisco*

SUMMARY

Even mild head injuries may cause cerebral swelling and vascular alterations, including vasoparalysis and increased vascular permeability. The severer the injury, the more pronounced these changes. They may cause death.

Maintenance of adequate oxygen supply to the brain is the most effectual means of preventing or reducing the severity of this secondary effect of cerebral trauma, and the preservation of a good respiratory exchange is therefore essential in a patient who is comatose as a result of a head injury.

The commonly employed measures such as an oral airway, suction and oxygen therapy may be tried first, but if the patient continues to have respiratory distress or cyanosis, an intratracheal tube should be employed for 24 hours; and then if there is no improvement, tracheotomy should be carried out. If the injury is severe, tracheotomy from the beginning may be a life-saving measure.

THE great majority of cases of injury to the cranium and its contents are dealt with by physicians not devoting their main interest to the special field of neurological surgery. To provide therapy based on sound physiologic principles and to recognize at an early stage the complications of acute head injuries which require surgical intervention, a clear understanding of the pathologic processes and alterations in physiologic factors that occur in patients with acute intracranial injury is essential.

From the Division of Neurological Surgery, University of California School of Medicine, San Francisco.

Presented before the Section on Industrial Medicine and Surgery at the 80th Annual Session of the California Medical Association, Los Angeles, May 13-16, 1951.

PATHOLOGIC PROCESSES IN CEREBRAL INJURY

Concussion: It is probable that loss of consciousness may be brought about in several ways. The comatose state may be associated with rapidly increasing intracranial pressure such as that caused by extradural and subdural hemorrhage. In such cases the fundamental mechanism is in all likelihood related to ischemic changes.[6] Transient disruption of consciousness without hemorrhage may be caused by severe jolt of the brain, as when the moving head suddenly strikes an immovable object or when the head is struck by a moving object. It is to injuries of this kind that the term "cerebral concussion" is applicable. There is an accumulating body of experimental evidence which indicates that in such cases a brief but pronounced rise in intracranial pressure may be the fundamental mechanism which initiates the alteration in consciousness.[4, 7] Furthermore, even though there may be no gross pathologic changes associated with injury of this kind, it has been shown that cerebral swelling occurs, the degree of which roughly corresponds to the severity of the concussion.[8] It is thus apparent that even in the mildest form of injury to the brain there is sufficient alteration in physiologic process to be of clinical importance.

Contusion and Laceration: These terms describe pathologic changes in the brain ranging from small petechial and perivascular hemorrhages to gross hemorrhagic lesions and disruption of brain tissue. Of importance from a therapeutic standpoint are associated changes in both the parenchyma and vascular structures of the brain. The vascular changes

have been emphasized by Scheinker and Evans[5] who have grouped them, by stages, as follows: (1) Vasoparalysis, generalized or local, associated with increased permeability of the vessel walls for serous fluid and erythrocytes; (2) degeneration and necrosis of the vessel walls; and (3) chronic vascular changes. The early changes are of importance in cases of acute injury. It has been shown[1, 2] that mechanical irritation of the vascular tree results in constriction of the capillaries and smaller vessels of the cerebrum, which is followed by paralytic dilatation of the terminal segments with continued constriction of the proximal arterioles. Subsequently, due to resulting interference with the cerebral blood supply and accompanying stasis, the oxygen supply to the parenchyma as well as to the vessel walls is compromised, leading to accumulation of fluid within the tissues both locally and generally. Thus a train of events is initiated which results in cerebral swelling. As has been stated, swelling may occur even in the milder injuries associated with cerebral concussion. If this process continues unabated, the end result is actual necrosis of varying degree of both parenchymal and interstitial tissue.

In the present state of knowledge it is not possible to be certain whether increased vascular permeability is the primary cause of cerebral swelling or whether other mechanisms may play a role. In any event, there can be no question that a diminished oxygen supply, if not initiating such changes, can certainly augment them. Furthermore, it is reasonable to assume that in the early stages of the process this abnormal condition may well be reversible. Therefore, the treatment and prevention of hypoxia become paramount in caring for the patient with acute head injury.

Increased Intracranial Pressure: For many years increased intracranial pressure was considered to be the major problem in the treatment of head injuries, and even in Hippocratic times there was controversy as to whether purely expectant treatment or the more radical procedure of trephination should be utilized. There can be no question that when the increased pressure results from a localized collection of blood from either an extradural or subdural hemorrhage, operative intervention is necessary. When, however, the increased intracranial pressure occurs as the result of swelling of the brain, it is now generally held that operative decompression is inadequate and that therapeutic efforts should be directed toward maintaining adequate oxygen supply to the brain and to the maintenance of fluid and electrolyte balance.

TREATMENT OF BRAIN INJURY

For concussion per se, since it is a transient episode, no specific therapy is necessary. At the other extreme, there is little that can be done to restore the function of tissue which is structurally damaged at the time of injury. However, on the basis that the important alterations occurring with cerebral swelling and contusion may be caused by vascular alterations and hypoxia and thus may be reversible, specific therapeutic measures should be employed to minimize these changes.

Maintenance of Systemic Circulation: Since the brain is dependent upon the systemic circulation for an adequate supply of blood, shock when present must be combated vigorously by such measures as infusion of blood and fluids to maintain the volume of blood.

Prevention of Hypoxia: The vascular and parenchymal changes which lead to cerebral swelling not only initiate but are also augmented by cerebral hypoxia, and thus a vicious cycle of increasing swelling, vascular insufficiency and hypoxia is established. Since it is to such departures from the normal state that treatment must be directed, the prevention of hypoxia becomes of primary importance. The first and foremost measure in this direction is the maintenance of an adequate airway, since hypoxia follows the mechanical respiratory obstruction due to retained secretions.

The following are important considerations in dealing with the problem of proper respiratory exchange in unconscious patients:

1. Position in bed. There is better drainage of secretions from the bronchial tree with the patient in the lateral position on a flat bed; but it is also desirable to facilitate venous return from the head in order to lessen intracranial pressure, and for this purpose the head of the bed should be elevated. It is usually necessary to compromise upon intermittent lowering of the head of the bed to permit drainage of secretions.

2. Provision of an oral airway by which the tongue is held forward and pharyngeal obstruction prevented.

3. Intermittent aspiration of the pharynx and upper trachea. It is not sufficient merely to remove the secretions from the posterior pharynx; a small rubber catheter should be carefully inserted into the upper trachea and gentle suction applied.

4. The use of oxygen by means of nasal catheter, mask, or oxygen tent.

5. Intermittent bronchoscopy in order to aspirate retained bronchial secretions.

6. The use of an endotracheal tube (which, however, ordinarily cannot be kept in place for longer than 48 hours).

Recently Echols[3] and co-workers advocated resort to tracheotomy if the measures already mentioned do not provide an adequate airway and respiratory exchange. Results obtained with this procedure were reported to have been excellent.[3] The character of respiration as well as other factors in patients who have severe cerebral injury are such as to indicate the use of tracheotomy. Respiration often is labored, the patient is usually unable to swallow, there is an augmented respiratory secretion secondary to vagal stimulation, and frequently, in spite of the usual measures, the patient is continuously cyanotic. With

more severe degrees of injury, respiration may be shallow and inadequate. Following tracheotomy there is usually immediate and dramatic improvement not only in the respiratory effort of the patient but also in the color of the skin and in the state of consciousness. There are other advantages to this method of providing an adequate airway. As the tracheobronchial tree can be quickly and easily aspirated and kept free of secretions, the head of the bed can be kept elevated constantly to promote better venous return from the cranium and a reduction of intracranial pressure. Also, the hazard of aspiration of vomitus is obviated. The relief of partial respiratory obstruction reduces the attendant elevation of intrathoracic venous pressure and secondarily reduces intracranial venous pressure. The reduction of increased carbon dioxide tension in the arterial blood and the increase in oxygen tension reduce cerebral vasodilatation, since increased carbon dioxide tension and decreased arterial oxygen saturation are the most potent cerebral vasodilators known. Intracranial pressure is thereby diminished. Finally, by avoiding prolonged cerebral anoxia, irreversible damage to the neurones is minimized. This lessens the period of coma and the degree of residual neurological deficit.

A reasonable program for preventing hypoxia in the comatose patient with a head injury would appear to be as follows: First, conservative measures such as proper position in bed, provision of an oral airway, and administration of oxygen. If these measures do not reduce restlessness, labored respirations and cyanosis, and if the period of unconsciousness can be anticipated not to extend beyond 48 hours, an endotracheal tube may be considered. However, if the patient is more seriously injured it is better to carry out tracheotomy immediately, or if at the end of 24 hours there has been no improvement in the patient's condition, the endotracheal tube can be withdrawn and tracheotomy employed.

Control of Temperature: Hyperthermia frequently is present in patients with severe acute cerebral injury, and the higher the temperature the greater the liability that the patient will die. Hyperthermia may be caused by either direct trauma to the brain stem or indirect involvement of the brain stem through circulatory deficiency resulting from transtentorial herniation of the temporal lobes. Interference with the normal temperature-regulating mechanism results in either case. The increased temperature increases the metabolic and oxygen requirements of tissues which may already be suffering from oxygen want. If the hyperthermia is unchecked, peripheral circulatory collapse occurs, which further reduces oxygen supply to cerebral tissues.

Hyperthermia should be vigorously and persistently combated. Bed clothes should be discarded. The patient should be sponged frequently with tepid water or alcohol, and ice packs should be applied to the axillae, the groin, and great vessels of the neck. If the temperature does not decline, all clothing should be removed from the patient and air fanned over him continuously. Acetylsalicylic acid in doses of 0.6 gm. to 1 gm. inserted in the rectum may be of some help.

Fluid Balance: The physiologic requirements of the patient are best served by maintaining fluid intake to offset all losses via the lungs, perspiration, the kidneys, and vomiting. Two to three liters of fluid per day usually suffices. It is believed that dehydrating the patient does not reduce cerebral edema sufficiently to warrant inviting the disturbances in fluid and electrolyte balance which necessarily follow. Likewise, flooding the patient with excessive amounts of fluid accomplishes no useful purpose and does more harm than good. Sodium intake should be limited since large amounts would hold fluid in the tissue. If fluids are administered parenterally, all but one of the daily intravenous infusions should be free of sodium.

If there are localized accumulations of blood or fluid outside the dura mater or beneath it or inside the brain, they may cause pressure that enhances the physiologic disturbances already present. Early diagnosis and prompt removal are necessary. The diagnosis of a space-occupying accumulation of fluid is often difficult, but the presence of such lesions may be suspected if the state of "unconsciousness" deepens and neurological symptoms referable to focal pressure develop progressively.

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The Topical and Systemic Use of Cortisone in Dermatology

Ben A. Newman, M.D., and Fred F. Feldman, M.D., *Los Angeles*

SUMMARY

Part I of this report deals with the topical use of cortisone in a variety of skin diseases. Fifteen patients with chronic discoid lupus erythematosus, four patients with necrobiosis lipoidica diabeticorum, four with psoriasis, one with lichen planus and one with granuloma annulare were treated with cortisone ointment. All the patients with chronic discoid lupus erythematosus had some degree of improvement. In two patients with chronic lupus erythematosus, complete clearing of the eruption occurred. In four patients with necrobiosis lipoidica diabeticorum remarkable involution resulted. Patients with psoriasis, lichen planus and granuloma annulare were not benefited.

Part II deals with the systemic use of cortisone. Eight patients with severe serum sickness-like penicillin reaction responded dramatically to parenterally administered cortisone. In two cases of pemphigus vulgaris and one case of Sulzberger-Garbe disease, the disease was kept in remission with cortisone administered intramuscularly as well as orally. Partial improvement resulted in a case of localized myxedema associated with malignant exophthalmus. Two patients with exfoliative dermatitis due to therapy with heavy metals responded dramatically to cortisone. No beneficial effects were noted in patients with chronic urticaria and atopic dermatitis.

The systemic use of ACTH and cortisone in dermatology at present should be confined to patients with known fatal or hopelessly incapacitating diseases and to patients with extreme hypersensitivity reactions which may be protracted or life-endangering, and which can be controlled or cured with a relatively small total dosage of the agents in a short time.

THE introduction of adrenocorticotropic hormone (ACTH) and cortisone into clinical medicine, and its correlation with Selye's[23] work on the general adaptation syndrome, is no doubt the initiation of a new era in dermatology, if not in all medicine. Therapeutic appplication of these steroids is still in its infancy, but what perhaps is most momentous is its stimulus to clinical research. The results of experimentation in the basic sciences and in clinical medicine offer great promise of explaining many of the vaguely understood morbid processes of the skin.

The purpose of this presentation is to report the authors' clinical experience in the use of cortisone in the treatment of a variety of dermatoses, after more than a year's study. The first part of this report will deal with the use of cortisone topically, and the second part will be confined to observations on systemic administration. The presentation will be concluded with a synopsis, in table form, of the present-day status of ACTH and cortisone in dermatology.

Eight of the cases reported upon herein were presented at recent meetings of the Los Angeles Dermatological Society.

From the Departments of Dermatology, Cedars of Lebanon Hospital and Los Angeles County General Hospital.

Presented before the Section on Dermatology and Syphilology at the 80th Annual Session of the California Medical Association, Los Angeles, May 13 to 16, 1951.

Cortisone in Carbowax was supplied by Merck & Co.

TOPICAL APPLICATION OF CORTISONE

The favorable results achieved by ophthalmologists[22, 29] in the treatment of ocular inflammatory disease with cortisone applied locally suggested that regressive changes in certain dermatoses might follow topical application of the hormone. Due to the difficulty in obtaining cortisone, and because it was felt that more could be learned by a concentrated study on a few appropriate recalcitrant dermatoses (preferably the so-called collagenous diseases), the local use of cortisone was limited primarily to chronic discoid lupus erythematosus. The other dermatoses treated included necrobiosis lipoidica diabeticorum, granuloma annulare, psoriasis, and lichen planus.

Originally cortisone was used in the concentration of 3.3 mg. and 5 mg. per gram of Neobase®. Shortly after this study was begun, however, Carbowax® was substituted for the vehicle, and later a concentration of 25 mg. per gram of Carbowax was used.

Chronic Discoid Lupus Erythematosus

Since the original account[15] of the authors' experience in the treatment of chronic discoid lupus erythematosus with topical cortisone was written, the number of cases in the series has been increased; 15 patients with this disease were under treatment at the time of the present report. The duration of therapy ranged from six to 29 weeks. In the patients

studied, the duration of the disease ranged from six months to 17 years, and previous therapy had included the usually employed topical, oral and parenteral medication. Except in three cases (Cases 1, 7 and 15) the group studied were supplied with 25 mg. of cortisone per gram of Carbowax shortly after the investigation was begun, although some at first had been given ointments containing 3.3 mg. and 5 mg. per gram (Table 1). They were instructed to massage the ointment into each of the lesions three to four times daily. In the majority of patients maximal improvement did not occur until treatment with ointment of the higher concentration was begun. Only four patients had pronounced improvement. Except for one small segment of an original patch, one patient (Case 7, Table 1) had complete healing with pigmentation. However, when treatment was discontinued after involution, new small lesions developed in new locations on the face. One patient (Case 1) had complete clearing. In the two other patients (Cases 6 and 12) who had pronounced improvement, the involution was estimated to be over 95 per cent. The rest of the patients had involution ranging from 10 per cent to 75 per cent. In no instance was there untoward reaction either locally or systemically during the period of observation, nor was there any alteration of chemical contents of the blood. Tumid lesions appeared to respond better to topical application of cortisone than did hyperkeratotic lesions. The first change noted after inunction of cortisone was paling, followed by a reduction in the thickness of the lesion. In some patients the eruption took on a glazed appearance. In some instances healing occurred with pigmentation.

Maximal improvement in all the patients occurred within a period of one month after the use of cortisone ointment. Except in one patient (Case 7) in whom progressive steady improvement occurred until complete healing, little change was noted in patients continuing to apply cortisone ointment after a period of two months. In patients with flat or hyperkeratotic lesions, there was no more than slight improvement at any time.

REPORT OF A CASE

In the following case (Case 7, Table 1) involution of chronic discoid lupus erythematosus occurred following topical therapy with cortisone.

The patient, a 39-year-old Japanese male, was first observed June 17, 1950. There were erythematous annular and oval-shaped lesions on the face, neck and upper back. Adherent scaling and telangiectasia were noted in some of these areas and there was atrophy in a few patches. A clinical diagnosis of typical chronic discoid lupus erythematosus was made. The eruption had started on the nose in 1945 and later spread to the cheeks, forehead, neck, ears and upper back. In a complete medical and laboratory study carried out in May 1950, no other abnormality was noted.

From June 17, 1950, to Sept. 11, 1950, the patient was given Bistrimate®, crude liver extract, bismuth subsalicylate injections, applications of carbon dioxide ice, and tocopherols; and a 5 per cent para-aminobenzoic acid sun filter cream was prescribed for topical application. There was partial improvement in some of the lesions but most of them progressed. On Sept. 11, the patient was given an ointment containing 3.3 mg. cortisone per gram of Neobase and instructed to massage it into the affected areas three times daily. By Oct. 13 there was about 50 per cent improvement; the lesions were becoming pigmented and were undergoing involution. By Oct. 21 the lesions on the back had healed without pigmentation and those on the cheeks had healed with pigmentation. Lesions below the left eye were about 75 per cent involuted and were partially pigmented, while in a lesion in the left retro-auricular region there was evidence of the beginning of healing for the first time. By Oct. 28 the lesions below the eyes were completely

TABLE 1.—*Chronic Discoid Lupus Erythematosus*

Case No.	Age	Sex	Location of Lesions	Duration	Severity	Concentration Mg. of Cortisone Per Gram of Base	Weeks of Treatment	Degree of Improvement*
1	73	F	Face	10 years	Pronounced	3.3 and 5	6	Cleared
2	35	F	Face	10 years	Moderate	5 and 25	29	Moderate
3	52	F	Face, neck, arms, ears	2 years	Moderate	5 and 25	29	Moderate
4	45	F	Face	8 years	Pronounced	3.3 and 25	25	Moderate
5	41	F	Face	2 years	Mild	5 and 25	18	Slight
6	29	F	Face, scalp	10 months	Pronounced	25	8	Cleared
7	39	M	Face, neck back	5 years	Pronounced	3.3 and 5	17	Pronounced
8	44	F	Face	4 years	Pronounced	25	12	Moderate
9	23	F	Face	3 years	Pronounced	3.3 and 25	12	Moderate
10	30	F	Face	3 years	Moderate	3.3 and 25	12	Moderate
11	32	F	Eyelids	7 years	Moderate	25	10	Moderate
12	42	F	Lips and perioral region	15 years	Pronounced	25	13	Pronounced
13	40	M	Scalp, face	2½ years	Moderate	25	6	Slight
14	33	M	Lips, chin and nose	17 years	Pronounced	25	9	Slight
15	35	F	Cheeks, nose	6 years	Pronounced	10	8	Moderate

* 0-50%, slight; 50%-75%, moderate; 75%-100%, pronounced.

healed and there was only slight erythema remaining in the involved areas in the left retro-auricular region. By Dec. 2 the degree of improvement was 95 per cent.

On Jan. 9 the patient was presented at the meeting of the Los Angeles Dermatological Society to demonstrate the dramatic involution of the eruption. In some of the areas complete healing with pigmentation had occurred while in others pigmentation had decreased and a few remaining spots were atrophic.

The use of the ointment was discontinued at that time. When the patient was next observed, April 14, 1951, all previously treated lesions remained healed except for one residual 8 mm. patch on the left side of the neck. There was slight evidence of fading in residual areas of pigmentation. However, within the ensuing month four new lesions, 4 to 6 mm. in diameter, appeared in other locations on the face.

Necrobiosis Lipoidica Diabeticorum

Four patients with necrobiosis lipoidica diabeticorum confirmed by biopsy were treated with cortisone ointment in the concentration of 25 mg. per gram of base. The patient in whom the disease was the most severe had almost complete involution of lesions after the application of cortisone ointment over a period of eight weeks (the case is reported in detail in following paragraphs). Aside from the dramatic involution of the lesions in this case, the most striking feature was the healing of indolent ulcers within the involved area five days after the institution of treatment. Another patient had 90 per cent improvement after the first seven weeks of application of cortisone ointment. The patient discontinued use of the ointment for a period of three months, and when he was next observed there was no regression of the patch of necrobiosis. A third patient had definite improvement after only two weeks of using the ointment, but unfortunately was lost to further study. In a fourth patient, who at the time of this report had only recently come under the authors' care, there was 75 per cent involution of the lesion after only two weeks of cortisone inunction.

The favorable response noted in all of these patients is significant in view of the notoriously recalcitrant nature of this dermatosis. The method used is the only form of treatment of which the authors are aware that has ever resulted in such rapid response.

REPORT OF A CASE

The patient, a 24-year-old housewife, had diabetes mellitus of 12 years' duration. It had been controlled with insulin during this period. About five years previously a red patch had appeared on the lower part of the left leg and it gradually became larger. About ten months previously the lesion became ulcerated and the patient was given Terramycin®, which had no effect upon the ulcer. The lesion was 8 cm. long and 3 cm. wide, with an L-shaped extension at the lower pole. The borders of the lesion were violaceous; the center was yellowish-orange and contained telangiectatic vessels. At the superior and inferior poles of the lesion there were small superficial ulcers covered with a thick crust. Biopsy confirmed the clinical diagnosis of necrobiosis lipoidica diabeticorum.

During the first week of November 1950, cortisone ointment (3.3 mg. per gram of Neobase) was prescribed, and the patient was instructed to massage it into the lesion four times daily. The first change noted was dramatic healing of the ulcers by the fifth day. It was then noted that the redness and the yellow-orange color of the lesion were beginning to fade for the first time in five years. On Dec. 8 a more concentrated ointment was substituted (25 mg. of cortisone per gram of Carbowax). During the next two weeks, more pronounced involution was noted. On Jan. 9, 1951, the patient was presented at the monthly meeting of the Los Angeles Dermatological Society. At that time the lesion was smaller in area and there was a reduction of the thickness of the lesion so that when the skin was grasped between the fingers, wrinkling was observed. There were cribriform scars at the site of ulceration and dusky pigmentation of the previously violaceous periphery. The yellow-orange color at the center had changed to light pink. Therapy was discontinued for two months without regression. Cortisone inunction was then resumed and additional involution occurred. When the patient was last observed, there remained only slight tan pigmentation, and atrophic scars at the site of the previous ulcers.

Topical Use of Cortisone in Other Dermatoses

An attempt was made to observe the effects of topical application of cortisone in a small group of cases of unrelated dermatoses. Four patients with psoriasis, one with lichen planus and one with granuloma annulare applied cortisone ointment in the concentration of 25 mg. per gram of Carbowax. The eruption in these patients remained unaffected after therapeutic trial of at least one month.

COMMENT AND SUMMARY OF TOPICAL APPLICATION

At the time of this report, the period of investigation of the use of cortisone topically exceeded seven months. There is better basis for evaluation of the efficacy of topical use of cortisone in the group of dermatoses studied than was available at the time of the authors' previous report.[15] Favorable response ranging from minimal to complete clearing of lesions occurred in chronic discoid lupus erythematosus and necrobiosis lipoidica diabeticorum. No effect was observed in the lesions of psoriasis, lichen planus and granuloma annulare.

It is the authors' belief that if no improvement occurs after eight weeks of application of cortisone ointment, further change is unlikely. From the results of the present study cortisone ointment is obviously not a cure for chronic discoid lupus erythematosus, for healing occurred only at the site of the lesion treated. It could not be expected that topical application of cortisone would prevent the appearance of new lesions. (New eruptions occurred in one case.) The improvement obtained with this form of therapy suggests that it may be used as an adjunct with other methods of treating the disease.

The dramatic effect of topical application of cortisone in all of the patients with necrobiosis lipoidica diabeticorum is most encouraging.

An explanation for the effect of cortisone applied topically is wanting. Whether cortisone thus used acts by affecting the permeability of blood vessel walls, the collagenous fibers directly or its intermediary substance, or by some enzymatic action,

remains to be established. Beneficial effects of locally applied cortisone have been established by ophthalmologists who have reported excellent results in ocular inflammatory conditions after topical instillation[20] as well as with subconjunctival injection[22] of cortisone. Jones and Meyer[14] experimentally were able to inhibit vascularization of rabbit corneas following alkali burns by previous subconjunctival injection of cortisone. Castor and Baker[6] demonstrated that regressive changes in the normal skin of the rat can be produced by local application of cortisone in alcoholic solution. They noted thinning of the epidermis, cessation of hair growth, shrinking of sebaceous glands and reduction of dermal thickness by loss of collagen fibers, but no effect on the elastic tissue. They also noted that fibroblasts and other cells of the dermal connective tissue decreased in number. An interesting observation on their part was that after 180 days of therapy, a refractory state developed and hair began to grow.

The fact that, in the present series, improvement of lupus erythematosus progressed up to a certain point and then ceased suggests that a similar refractory state may have developed. Grant, Cornbleet and Grossman[9] were not able to duplicate the conditions observed by Castor and Baker. Grant and co-workers applied adrenal cortex extract in 25 per cent alcoholic solution to five human subjects for 14 weeks. They observed no evidence that cortical steroids inhibit the growth of skin structure in humans. The suppressive action of cortisone on connective tissue was borne out by Plotz[20] and his associates in experimental studies of wound healing. Baker and Whitaker[1] also demonstrated a striking interference in the formation of granulation tissue by direct application of hog adrenal extract dissolved in 25 per cent alcohol solution to cutaneous wounds in rats. However, they observed that adrenal extract prevented the proliferation of fibroblasts and the endothelium of capillaries, for a limited period. Opsahl's[18] work suggested another mechanism of action of adrenal steroids. She noted that adrenal cortical extracts[17] and Compound E[18] inhibited the spreading of intradermally injected india ink with hyaluronidase.

CORTISONE ADMINISTERED SYSTEMICALLY

The widespread use of cortisone in the so-called "collagenous or mesenchymal diseases" led the authors to direct investigation to some of the less frequently reported but appropriate dermatoses in which cortisone might be expected to have an effect. Studies of parenteral use of cortisone were primarily directed toward hypersensitivity states.

Penicillin Reactions

Eight patients with severe reactions to penicillin were treated with cortisone. The patients all had serum sickness-like reactions with fever, arthralgia, angioneurotic edema and extensive migratory urticaria. Patients with lesser degrees of reaction were not included because it was felt that, if they were, a fair evaluation of the effect of cortisone might not be achieved. All but two of the patients were so severely affected that hospitalization was required. Cortisone was administered intramuscularly in the following manner: 100 mg. each 12 hours for the first 24 hours and then 100 mg. daily until subsidence of the reaction. All subjective and objective symptoms disappeared in two to five days, the average being three days. The response was much more dramatic and rapid than that obtained in similar patients treated with antihistaminics and intravenously administered procaine.

REPORT OF A CASE

A 37-year-old male received penicillin injections Dec. 22, 23 and 24, 1950, because of injuries received in an automobile accident. On Jan. 2, 1951, the patient noted severe itching of the scrotum and inguinal regions, and the following day there was pronounced edema and erythema of the scrotum as well as erythema, scaling and eczematization of the inguinal and perianal areas. There was generalized urticaria with angioneurotic edema of the face and hands, and pronounced swelling and tenderness of the wrists and elbows. The patient complained of pain in the joints and the temperature rose from 100° F. to 103° F. He was hospitalized and received 100 mg. of cortisone twice daily for the first 48 hours and a total of 100 mg. during the succeeding 24 hours. Within 24 hours after therapy was started the temperature was normal and the arthralgia had abated. Most of the urticarial lesions had disappeared by the end of 48 hours but angioneurotic edema to a lesser degree was still evident. At the end of 72 hours the patient was completely free of all previous subjective and objective symptoms.

Pemphigus Vulgaris

Two patients with pemphigus vulgaris were treated. One, a 70-year-old man with severe bullous pemphigus of nine months' duration, received 100 mg. of cortisone intramuscularly daily for ten days. Rapid involution of all lesions occurred. Cortisone to be taken orally was then prescribed, in doses of 75 mg. daily, decreasing to 50 mg. per day. When cortisone dosage was further reduced, a few scattered blebs and bullae appeared; when it was increased to 50 mg. daily again the patient became and remained symptom-free.

The other patient (who was presented at a meeting of the Los Angeles Dermatological Society after the first remission) had been under observation for 12 months at the time of this report. Because of unusual features, the case of this patient is presented in detail.

REPORT OF A CASE

A 50-year-old white male had pemphigus of two years' duration. There were profuse erosions and clear blebs of the mucous membranes of the tongue, cheeks, pharynx, and of the vermilion borders of the lips, as well as vegetative lesions of the perianal and inguinal regions. Pemphigus vegetans was confirmed by biopsy, and by several dermatologists throughout the country. Past treatment had included aureomycin, bacitracin, acetarsone, sodium naphuride, x-ray therapy, transfusions and sulfonamides. There had been a single partial remission for two weeks following acetarsone therapy but relapse occurred despite an

increase in dosage. Therapy with cortisone acetate was started April 12, 1950. At that time there were thick vegetative lesions in the anogenital region, profuse erosions of the oral cavity and crusted lesions of the lips. Because of pain in the mouth, eating was difficult and the patient had lost 30 pounds in weight in six months. On the basis of reports that cortisone inhibits granulation tissue, it was thought that the administration of this steroid might have some effect upon the vegetating lesions of pemphigus. The dosage schedule was as follows: 100 mg. daily intramuscularly for four days; 75 mg. daily for four days; 50 mg. for four days; and 25 mg. every second day for three doses. From April 12 to May 7 the patient received a total of 975 mg. of cortisone acetate. The soreness of the mouth disappeared in four days, the vegetative lesions healed in eight days and the mouth was free of lesions in 14 days. On May 18, two weeks after discontinuance of treatment, a new crust appeared on the left side of the lower lip. By June 5 the entire lower lip was crusted and a few erosions began appearing in the mouth. On June 22, granulations of the inguinal region began to recur, and there were additional oral lesions. Cortisone therapy was reinstituted and from July 8 to August 1 the patient received 1,125 mg. Again the eruptions subsided rapidly. From Aug. 1 to the time of discontinuance of therapy on Jan. 8, 1951, the patient was given maintenance doses which were gradually reduced to only 50 mg. weekly. For nine months up to the time of this report (four months after discontinuance of therapy) the patient had had only occasional evanescent erosions in the mouth. There was no recurrence of vegetative lesions in the groin, and when last observed the patient was in excellent health and doing a full day's work.

Chronic Exudative Discoid and Lichenoid Dermatosis (Sulzberger-Garbe)

The case of one patient with this syndrome, who was treated with cortisone and observed over a period of eight months, is presented in detail:

REPORT OF A CASE

A 66-year-old white male, first observed Aug. 14, 1950, had intensely pruritic and excoriated, generalized, maculopapular and patchy, erythematous, scaly, exudative dermatosis. For two years he had been unable to work and had been under dermatological therapy constantly, including hospitalization at the Los Angeles County General Hospital on two occasions in 1949 (Sept. 28 to Nov. 21, and Nov. 30 to Dec. 15). During each hospital stay the symptoms cleared with bland therapy, but recurred immediately after discharge. Sodium arsenate, penicillin, x-ray therapy, Benadryl®, starch baths, permanganate baths, lotions and ointments, phenobarbital, Vioform® and Fowler's solution had been ineffective in the past. Result of a biopsy at the Los Angeles County General Hospital on Sept. 30, 1949, was reported consistent with the diagnosis of Sulzberger-Garbe disease.

From Aug. 24, 1950, to Dec. 20, 1950, cortisone was given intramuscularly: 100 mg. daily for four days, then 75 mg. daily for six days, and 50 mg. every second day for three doses. By Sept. 8, there was about 50 per cent improvement subjectively and objectively. Between Sept. 9 and Nov. 1, 50 mg. of cortisone was given intramuscularly every other day. From Nov. 1 to Dec. 20, 50 mg. was administered once weekly. Steady progressive improvement continued until Dec. 1. Itching during the day was completely eliminated and the patient was able to resume gainful employment for the first time in two years. On Dec. 20 there was partial relapse, subjectively and objectively. The dosage of cortisone was then increased as follows: 75 mg. intramuscularly on Dec. 20, 22 and 27; 75 mg. orally per day, from Dec. 27, 1950, to Jan. 31, 1951. From Feb. 1 to March 6 the dose was 50 mg. daily, and from March 7 to April 18 it was 50 mg. every other day. Since then the patient has taken 50 mg. orally once weekly, without relapse.

The second course of cortisone therapy resulted in even more striking improvement than was observed initially. At the time of report, the skin was practically free of all lesions, with only occasional itching during the night, and the patient was able to continue working. At no time was there any untoward effect clinically, and there were no changes in results of laboratory tests except for a reduction in the proportion of eosinophils from 22 per cent to 1 per cent.

Localized Myxedema Associated with Malignant Exophthalmus

The authors observed a 56-year-old man with malignant exophthalmus and extensive pretibial myxedema that appeared after radioactive iodine therapy for hyperthyroidism. The exophthalmus had progressed to such a degree that orbital decompression had been recommended. Cortisone was given and within two weeks—a total of 600 mg. of the hormone was given during the period—there was considerable regression of both the exophthalmus and the pretibial myxedema. Several weeks later another 900 mg. of cortisone in divided doses was administered, and there was 75 per cent regression of the exophthalmus and almost complete involution of the localized myxedema. Nine months later, mild relapse was noted but it was insufficient for the patient to desire additional therapy.

Exfoliative Dermatitis

Two patients with generalized erythroderma following gold therapy for arthritis were treated with cortisone. The first patient, a male 40 years of age, had seborrheic-like dermatitis of the scalp and all the intertriginous areas which rapidly spread over the entire body. There was edema and weeping of all the flexural surfaces. A course of British anti-lewisite was administered with no effect upon the dermatitis. Two weeks later cortisone was given, 100 mg. intramuscularly daily for six days, with dramatic involution; then 50 mg. intramuscularly daily for five days. One week later there was mild recurrence of the seborrheic-like dermatitis, but it was controlled with oral administration of 50 mg. of cortisone daily for three weeks. In the other patient, a 52-year-old woman, similar extensive seborrheic-like dermatitis developed soon after gold therapy and it gradually extended to involve the entire body with erythroderma. There were exudative lesions of the flexural surfaces. A course of British anti-lewisite (BAL) initially induced considerable improvement, but relapse soon followed. Another course of BAL was ineffective. Several weeks later cortisone was administered intramuscularly, 100 mg. daily for four days, 75 mg. for four days, and 50 mg. for six days, for a total of 1,000 mg. Involution of the dermatitis was prompt and complete.

However, two weeks later there was partial relapse. The patient was then given cortisone 50 mg. intramuscularly daily for two weeks; then 50 mg. every other day for two weeks. She remained well thereafter.

Atopic Dermatitis

Three male patients with long-standing atopic dermatitis so severe as to make hospitalization necessary, did not have satisfactory response to cortisone given in the dosage schedule advocated for rheumatoid arthritis. In one patient who had early favorable response to the hormone, increased dosage was required to maintain the initial improvement. When cortisone was discontinued there was prompt relapse and the disease then was more severe than it had been before the hormone was given.

Negative Results

Three patients with chronic urticaria of long duration and of unknown cause had no response to cortisone acetate administered intramuscularly.

ADRENOCORTICOTROPIC HORMONE (ACTH)

The authors' experience with ACTH has been too recent and too limited to warrant a detailed report of observations. The hormone was used in treating postpartum toxic dermatitis, autosensitization dermatitis, generalized subacute exudative neurodermatitis and severe bullous erythema multiforme-like penicillin reaction. In the patients treated for these conditions, the lesions cleared following use of ACTH in doses comparable to those advocated for rheumatoid arthritis. The results were similar to those obtained with cortisone. It was the authors' impression that the response to ACTH was perhaps even more rapid than that which occurred when cortisone was given. However, that opinion is based on observation of only a very small number of patients treated with ACTH.

The authors believe that ACTH may be more rationally employed to obtain an initial rapid response as reported by Irons[13] and co-workers, and that cortisone might be used subsequently in maintenance doses, with the dosage gradually reduced to complete discontinuance.

COMMENT AND SUMMARY ON USE OF CORTISONE SYSTEMICALLY

The response of eight patients with severe serum sickness-like penicillin reactions treated with cortisone was dramatic in that the reactions were terminated in two to five days. Fever and subjective complaints usually subsided within 24 hours. Dramatic improvement and healing were also observed in patients with exfoliative dermatitis.

Maintenance of remission in two patients with pemphigus vulgaris compares with the experience of others.[5] To date this steroid offers only remission for this usually lethal disease. Whether ACTH or cortisone will prove to be curative is questionable, and many years of observation will be required to come to any definite conclusion. Results were favorable in the treatment and observation of a patient with Sulzberger-Garbe disease over a period of eight months, but again it appears that only remission will be possible.

Hench's[10] classic comment that "cortisone appears to have little or no effect on the irritant but seems to provide the susceptible tissue with a shield-like buffer against the irritant" apparently still holds true. However, cortisone is more than just a hormonal agent capable of causing remissions in some previously recalcitrant or fatal skin diseases. At present it is, in the authors' view, the definitive drug of choice in the treatment of certain hypersensitivity states: (1) Dermatitis medicamentosa, such as severe reactions to penicillin, and exfoliative dermatitis due to drugs (including heavy metals), and (2) autosensitization dermatitis with severe generalized cutaneous involvement. In such conditions, the hormone offers clinical cure. It is true that such conditions may be self-limited, but cortisone so shortens the course that diseases which might be prolonged or even life-endangering are relatively innocuous.

In short, it appears that cortisone and ACTH are effective in two main groups of dermatoses. First, in the so-called collagenous diseases, and secondly in dermatoses characterized by a sensitivity state. In the collagenous or mesenchymal diseases, the effects of these hormonal agents are not curative, but use of them has induced remissions for varying periods. In the hypersensitivity states they are not truly curative, but they do act more definitely in that they shorten and reduce the intensity and duration of the pathologic manifestations.

Probably the greatest significance of cortisone and ACTH in dermatology, and perhaps in the whole field of medicine, lies in the stimulus to basic research and the promise for a physiopathologic explanation for some of the little understood but grave disease entities. The implication and correlation with Selye's[23] work is very interesting. ACTH and cortisone apparently influence the adaptive processes of the patient whether the original sensitizing agent be truly allergic or toxic.

Enthusiasm for these hormones should be tempered with caution. Reports of many varieties of serious reactions have already appeared. It is the authors' opinion that systemic administration over long periods or in large doses is justified only for experimental purposes by experienced groups. As regards diseases of the skin, cortisone and ACTH should be used clinically only for patients with known fatal or hopelessly incapacitating dermatoses, and for patients with extreme hypersensitivity reactions which may be protracted or life-endangering. In the latter group there is justification for the use of these steroids if the morbid process can be controlled or cured in a short period of time with a relatively small total dosage. The authors are op-

posed to the administration of cortisone or ACTH in large and prolonged dosage to patients who have chronic dermatosis of a kind known to recur when the therapy is discontinued.

TABLE 2.—*Summary of Reported Results with Cortisone and ACTH in Treatment of Skin Diseases*

UNIFORMLY BENEFICIAL EFFECTS (GENERALLY DRAMATIC)
1. Drug eruptions
Severe penicillin reaction[2, 12]
Exfoliative dermatitis[2]
2. Severe auto-sensitization eruption
3. Toxic dermatitis
TRANSITORY BENEFICIAL EFFECTS
1. Lymphosarcoma[19]
2. Hodgkin's disease[19]
3. Other lymphomas[19]
REMISSIONS INDUCED—ULTIMATE CURE QUESTIONABLE (USUALLY REQUIRE MAINTENANCE DOSE)
1. Acute disseminated lupus erythematosus[4, 8, 13, 26, 27]
2. Dermatomyositis[8, 27]
3. Psoriatic erythroderma[27]
4. Psoriasis with arthropathy[13]
5. Psoriasis vulgaris[13, 16, 27]
6. Scleroderma[3, 11, 24]
7. Scleroderma (ACTH only)[13]
8. Periarteritis nodosa[13, 25]
9. Atopic dermatitis
10. Pemphigus vulgaris[5, 27]
11. Long-standing erythroderma[13]
12. Pemphigoid eruptions[5]
NO EFFECT IN:
1. Sarcoidosis[27]
2. Mycosis fungoides[28]
3. Herpes simplex[27]
4. Varicella[27]
5. Herpes zoster[27]
6. Moniliasis[27]
7. Epidermolysis bullosa[5]
8. Melanocarcinoma[19]
QUESTIONABLE EFFECTS IN:
1. Chronic discoid lupus erythematosus[13]
2. Advanced scleroderma
*3. Psoriasis vulgaris
*4. Atopic dermatitis
UNFAVORABLE EFFECTS MAY OCCUR IN PATIENTS WITH:
1. Acne vulgaris
2. Hirsutism
3. Periarteritis nodosa[13, 25] (marked occlusive arterial tendency during healing reported by Shick and Irons)
4. Scleroderma[24] (thrombotic ischemic infarctions of kidney—Sharnoff)
5. Prepsychotic states
6. Hypertension[26]
7. Bacteremia and septicemia[7]
8. Tuberculosis
9. Renal insufficiency
10. Congestive heart failure[26]
11. Diabetes mellitus

*Note: It is the authors' opinion that relapse following discontinuance of the hormone may be more severe than the original disease.

REVIEW OF LITERATURE ON SYSTEMIC USE OF ACTH AND CORTISONE IN DERMATOLOGY

It is apparent that definite conclusions cannot be drawn from reports in the literature on the use of ACTH and cortisone in dermatologic conditions because of the limited time that these agents have been used. Except for reports on the use of these steroids in the collagenous diseases the published information is meager. In some instances there is a divergence of opinion regarding the efficacy of ACTH over cortisone.[13]

In Table 2 an attempt is made to correlate data from the literature with the authors' observations and information received in personal communications from other physicians.

6333 Wilshire Boulevard.

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Current Concepts of Primary Dysmenorrhea

MATHEW ROSS, M.D., *Beverly Hills*

SUMMARY

Menstruation, a physiologic function, should be free of organic or psychic discomfort, but often it is not.

As to somatic causes, much has been postulated, little proved. There is evidence that somatic dysmenorrhea is caused by action of progesterone upon the uterus. And there is indication also that the cause may lie in some abnormality of the cervix or abnormal effect upon it.

Traditional association of menstruation with "illness," "curse" and the like is indicative of the psychic roots of dysmenorrhea. It has been observed that there is striking parallel between dysmenorrhea in adulthood and psychological maladjustment in childhood. Cure of psychogenic dysmenorrhea may be difficult. Proper anticipation—emotional preparation of the girl from infancy on, then sound instruction in biologic fact—would seem to be a major means of prevention.

AS a physiologic phenomenon, menstruation should be free of organic or psychic discomfort. That this is not the case is common knowledge. It has been estimated that approximately 35 per cent of menstruating women have dysmenorrhea, beginning at menarche in 65 per cent and a few years later in the remaining 35 per cent. Clinical observation supports the view[18] that in nulliparous women over 30 years of age, dysmenorrhea becomes irregular and less intense and disappears at the climacteric.

Two broad categories of dysmenorrhea are recognized: Primary or essential, and secondary. The latter is secondary to pelvic disease. It is not dealt with in this presentation. The former occurs in the absence of significant, demonstrable, organic pelvic disease.

Primary dysmenorrhea may be manifest only as cramps in the lower abdomen, but frequently it is accompanied by headache, backache, lassitude, nausea and vomiting, emotional lability and depression. Dysmenorrheic pain varies in character from severe and aching to colicky and labor-like. It may be so severe as to force the patient to bed for one to several days each month.

Even if a pelvic lesion is present, the possibility that all the dysmenorrheic symptoms are not attributable to it should be borne in mind.

Associate Psychiatrist, Student Health Service, University of California, Los Angeles.

SOMATIC CONCEPTS

Much has been incriminated but little proved in the etiology of dysmenorrhea. A few facts are established:

1. Only in ovulatory cycles where a progesterone effect is demonstrable in the endometrium does dysmenorrhea of the uterine-cramp type occur.[2, 14, 15, 20, 21, 23, 24]

2. Dysmenorrhea can be prevented by preventing ovulation.[20, 21]

3. Uterine cramps can be induced by the administration of progesterone[20, 23] during anovulatory cycles when the ovary produces no progesterone.

It would thus seem that dysmenorrhea occurs only when the uterus has been acted upon by progesterone.

Suspicion has been directed to the cervix by the following observations:

1. Cramps occur in the latter half of the contraction cycle[15] when the cervix rather than the cornua or the fundus is presumably fundamentally involved.

2. Parturition has repeatedly been clinically observed to alleviate dysmenorrhea.

3. Operative dilatation of the cervix will sometimes eliminate dysmenorrhea.[17]

Less conclusive has been the evidence of different pain thresholds in dysmenorrheic and non-dysmenorrheic women, where some overlapping in reaction to controlled painful skin stimuli was noted, and where relief with progesterone, a medication not known to be analgesic, was obtained.[9]

PSYCHIC CONCEPTS

Early in the recorded history of mankind one finds the roots of superstition, misconception, and taboos surrounding the menstrual function of women. These attitudes are epitomized in the *Natural History of Pliny:* "The touch of a menstrous woman turned wine to vinegar, blighted crops, killed seedlings, blasted gardens, brought down the fruit from trees, dimmed mirrors, blunted razors, rusted iron and brass (especially at the waning of the moon), killed bees or at least drove them from their hives, caused mares to miscarry, and so forth." Anthropologists have collected similar data from all parts of the world. That these beliefs and emotional attitudes still persist can be attested by those who study the dreams and fantasies of contemporary mankind. Mary Chadwick has written "The Psychological Effects of Menstruation,"[3] a most informative monograph, which comprehensively deals with this material from ancient to modern times.

On every hand menstruation is referred to by modern women as "the curse," "being ill," "falling off the roof," "being sick," being "unwell," and the like, indicating the underlying attitude toward the

function. The infrequency with which physicians hear the process called "menstruation" reveals a significant emotional expression of today's woman. The unscientific, illogical restrictions placed upon the activities of menstruating women are still numerous in our "enlightened" civilization.

Here, then, is a significant psychic root in the pathogenesis of dysmenorrhea—a deep, widespread, historical, cultural fostering of an attitude toward a physiological process which scientific facts have not yet been able to remove from the vast repository of magical, superstitious thinking and feeling in the mind of man.

Granted that each woman should have the opportunity to acquire biologic facts, it must be emphasized that the adequate utilization of these data is impossible unless she has been emotionally prepared to use them by someone with whom as a child she has a healthy emotional relationship, preferably the mother.

This leads to consideration of the preparation of the child for her first menstruation, which has been described as "the badge of femininity." How this badge is worn—whether in shame, guilt, remorse, sorrow, fear, pride, joy, or whatever—sets the stage for the reaction to a constantly recurring event extending over many years in the woman's life. The preparation properly begins in infancy when emotional patterns are developing; when they have little obvious connection with what is popularly, narrowly, and incorrectly not considered sexual. No longer does the scientist tolerate the view that sex initially enters human life at puberty; he recognizes its presence in the infant, baby, and child. It is in this period that the family, especially the mother, has the opportunity of preparing a daughter by cultivating healthy emotional attitudes about human anatomy and physiology, masturbation, sexual intercourse, pregnancy, and the like, as well as femininity, to wear her "badge" proudly and joyfully until such time as desire for motherhood makes menstruation what Gill[8] called "the weeping of the disappointed uterus." Unless the little girl can conceive of womanhood as quite as desirable as manhood, menstruation can serve as a constant reinforcement of gender inferiority, already sufficiently emphasized in the feminine mind by anatomical differences. Validation of this concept is at hand in every family where one merely listens to the growing child after her first awareness of genital anatomic differences. On an adult level, there are everywhere evidences[4, 6, 12, 13] of the "inferior" or "weaker" sex concept and woman's "struggle for emancipation."

The importance of the prepubertal emotional development of the girl is strikingly borne out by a study[25] of dysmenorrheic women and control groups. The incidence of psychological maladjustment in childhood was four times as great in the dysmenorrheic group as it was in the control group. Also more often noted in the dysmenorrheic women, as adults, than in the controls were two main personality constellations. One was characterized by a deep resentment of the feminine role; the other by a shy, withdrawn, anxious, and complaining personality in an obviously immature body.

Giffin[7] delineates three personality types in dysmenorrheic women:

1. The aggressive group—the so-called tomboys —"frequently premature in menstrual onset, resentful of their role early in life, and increasingly so as puberty appears."

2. The extremely dependent and shy group — "girls frightened of responsibility, phobic and insecure in most of life's situations, aware of their lagging behind classmates and friends, anxious to participate, yet unnerved in any new situation. As such individuals shy away from all responsibility, they cringe from the assumption of additional physiologic processes."

3. "The severely anxious or guilty women whose reaction to the menstrual period is as that to an impending punishment, a punishment deserved yet interminable by virtue of its repetition. These are the girls in whom the onset of the first menses is frequently related in time to some quasi-sexual relationship with a boy friend, to a bout of excessive masturbation, or to an extremely vivid fantasy, often including rape. The position of such girls is often made more difficult by the parental attitude that one just never mentions physiologic changes — whereupon the child reasons 'it must be bad since mother never mentioned it.' "

Other observers[3, 5, 8, 11, 16, 19, 22] have emphasized the importance of taboos, superstitions, misconceptions, fantasies, and the emotional personality constellations in playing determining roles in patients with dysmenorrhea.

It must be remembered that "dysmenorrhea is never the result of just one emotional conflict situation but always presupposes a series of emotional preconditions the foundation of which has been laid at different times."[11] In 1884 Clifford Allbott wrote: "A neuralgic woman seems thus to be particularly unfortunate. However bitter and repeated may be her visceral neuralgias, she is told either that she is hysterical or that it is all uterus. In the first place she is comparatively fortunate, for she is only slighted; in the second case she is entangled in the net of the gynecologist, who observes that her uterus, like her nose, is a little on one side, or, again like that organ, is running a little, or that it is as flabby as her biceps, so that the unhappy viscus is impaled upon a stem, or perched upon a prop, or is painted with carbolic acid every week—arraign the uterus and you fix in the woman the arrow of hypochondria, it may be for life."[1]

360 North Bedford Drive, Beverly Hills.

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The Role of the Connective Tissue Ground Substances (Mucopolysaccharides) in Allergic Injury

James F. Rinehart, M.D., *San Francisco*

SUMMARY

The basic histologic reactions of the classic allergic diseases and of several systemic diseases in which allergic mechanisms appear to operate are described and illustrated. Particular attention is drawn to the ground substances—mucopolysaccharides—which constitute important elements of connective tissue and vascular structure. The intimate locus of the allergic reaction appears to be in and to involve a swelling of such substances. It is suggested that antibodies (and possibly antigens) may be attached to these mucinous ground substances of the connective tissues.

IT is the purpose of this report to describe and illustrate the character and distribution of lesions in diseases known to be caused by allergic reaction and also in a group of diseases in which allergic mechanisms appear to operate. The discussion will be primarily concerned with the so-called anaphylactic type of hypersensitivity reaction as distinguished from the bacterial or tuberculin type.[19] In an effort to identify a unifying factor in what appear to be dissimilar lesions, particular attention will be directed to the intimate structure of the tissues involved.

THE GROUND SUBSTANCE OF CONNECTIVE TISSUES AND BLOOD VESSELS

In studies of arteriosclerosis[24] and rheumatic diseases, the author's attention was drawn to the substances known as mucopolysaccharides which constitute the ground substance or interfibrillar matrix of connective tissue structures. It is pertinent as a preface to this discussion to describe briefly the character and distribution of the mucopolysaccharides. Such materials are vital structural components of various connective tissues, including blood vessels. They are mucinous in character and serve importantly as mobile cement substances. Only recently have these substances been receiving deserved study.[5, 15] In usual histologic techniques these materials escape attention. In situations where the mucopolysaccharides are concentrated they may be demonstrated by the property of metachromatic staining with toluidine blue. However, the finely distributed mucopolysaccharides are not well shown by this method. Recently a useful and precise histochemical technique for demonstration of the mucopolysaccharides[23] was developed. It is based upon the method proposed by Hale.[7] In this technique the mucopolysaccharides are stained blue and well differentiated from reticulum and collagen fibers, which stain red, and from basement membranes, which stain an orange yellow. Sites where the connective tissue mucopolysaccharides are found to be present in considerable amounts include the reticular tissue of the skin just beneath the epidermis and surrounding skin appendages, the synovial tissues, tendon sheaths and heart valves. In blood vessels a mucopolysaccharide ensheaths the elastic tissue fibers and lies between the smooth muscle cells of the muscular arteries (Figure 1-A). A similar relationship between mucopolysaccharides and the smooth muscle cells exists in the bronchial wall. Delicate membranes of a mucopolysaccharide surround reticulum fibres and finely dispersed collagen and are in intimate relationship with the walls of capillaries and venules.

The mucins secreted by various epithelial cells are not germane to this discussion, but it should be noted that they are chemically related and assume a similar coloration in the histochemical method employed.

Mechanisms of antibody formation, the sites of antibody and antigen fixation and the precise nature of the injury resulting from their union are still obscure. It is well established that minute amounts of antigenic substance which gain access to the tissue fluids may generate large amounts of antibody which may be found in the blood and, more importantly, become fixed in tissue. Experimental as well as clinical investigations indicate that both sensitization and shock can be elicited by ingestion and inhalation as well as by parenteral administration of antigenic substances.[26]

HISTOPATHOLOGIC CHANGES IN ALLERGIC INJURIES

Urticaria

Evanescent urticarial lesions are characterized primarily by congestion and edema in the delicate reticular tissue beneath the epidermis. This is similar to the early reaction following intracutaneous injection of antigen in a sensitized organism. If the injury due to the antigen-antibody union is more intense and the reaction persists for 24 to 48 hours a cellular response occurs in which the eosinophil is commonly prominent (Figure 1-B). A swelling of the mucopolysaccharide at this site is demonstrable in appropriately stained sections.

From the Division of Pathology, University of California School of Medicine, San Francisco.

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Allergic rhinitis

This reaction is characterized by excessive serous and mucous secretion of the nasal mucosa with edema of the submucosal tissue. It is well known that smears of such nasal secretions are particularly rich in eosinophils. Pathologists rarely observe specimens from the early phases of simple allergic rhinitis or hay fever but commonly see the edematous polyps that have resulted from repeated allergic insults. Such a lesion is shown in Figure 1-C. The submucosal edema is striking, and the tissue is infiltrated with eosinophils. The epithelial mucopolysaccharide stains intensely blue and a more delicately stained mucopolysaccharide is present in the edematous submucosa.

Eczema

In eczema the pathologic changes, as observed both grossly and microscopically, are, of course, extremely varied depending upon the intensity of the insult, duration, external irritative factors and infection. Initially the process is one of capillary hyperemia with edema beneath the epithelium and at times vesiculation due to accumulation of fluid between epithelial cells. The mucoid ground substance beneath the epidermis is swollen.

Asthma

The pathologic changes in classical asthma are quite distinctive. In the relatively infrequent case that causes death the lungs are emphysematous, and the mucus which fills the small bronchi is extremely tenacious. The microscopic changes are varied in intensity, but the basic changes commonly observed are mucous plugs in bronchi, overactive mucous secretion of the epithelium, some hypertrophy of the bronchial musculature, and hyaline thickening of the basement membranes. There is a variable mucinous edema and inflammatory cell infiltration of the bronchial wall in which eosinophils are frequently prominent (Figure 1-D).

In consideration of allergic rhinitis, eczema and asthma it is of interest to recall that sensitization of local areas can be established if antigen is concentrated in those areas. One condition favoring such concentration is the circulation of antigen at a time when a local focus of inflammation is present.

Serum Sickness—Sulfonamide and Periarteritis

The syndrome of serum sickness affords a good example of a more generalized hypersensitivity reaction. The major clinical manifestations are well illustrated by the following case record:

A white male 28 years of age had received tetanus antitoxin for a laceration of the hand. In a few hours urticaria developed, then subsided. Two weeks later the patient became acutely ill, with fever, urticaria, painful swollen joints and edema about the eyes. During the ensuing week the clinical manifestations noted continued, and he was admitted to the hospital one week after the onset of symptoms. Upon physical examination, an injected pharynx and diffuse soft swelling of the neck were noted. Several joints were painful on movement and were swollen and reddened. The skin was hot and dry, and on it were urticarial lesions quite like the erythema marginatum of rheumatic fever except that they were more prominent. (It is of interest that Holt and McIntosh,[9] commenting on the occurrence of erythema marginatum, stated that "unless this occurs as a manifestation of serum disease it is nearly always rheumatic in origin.")

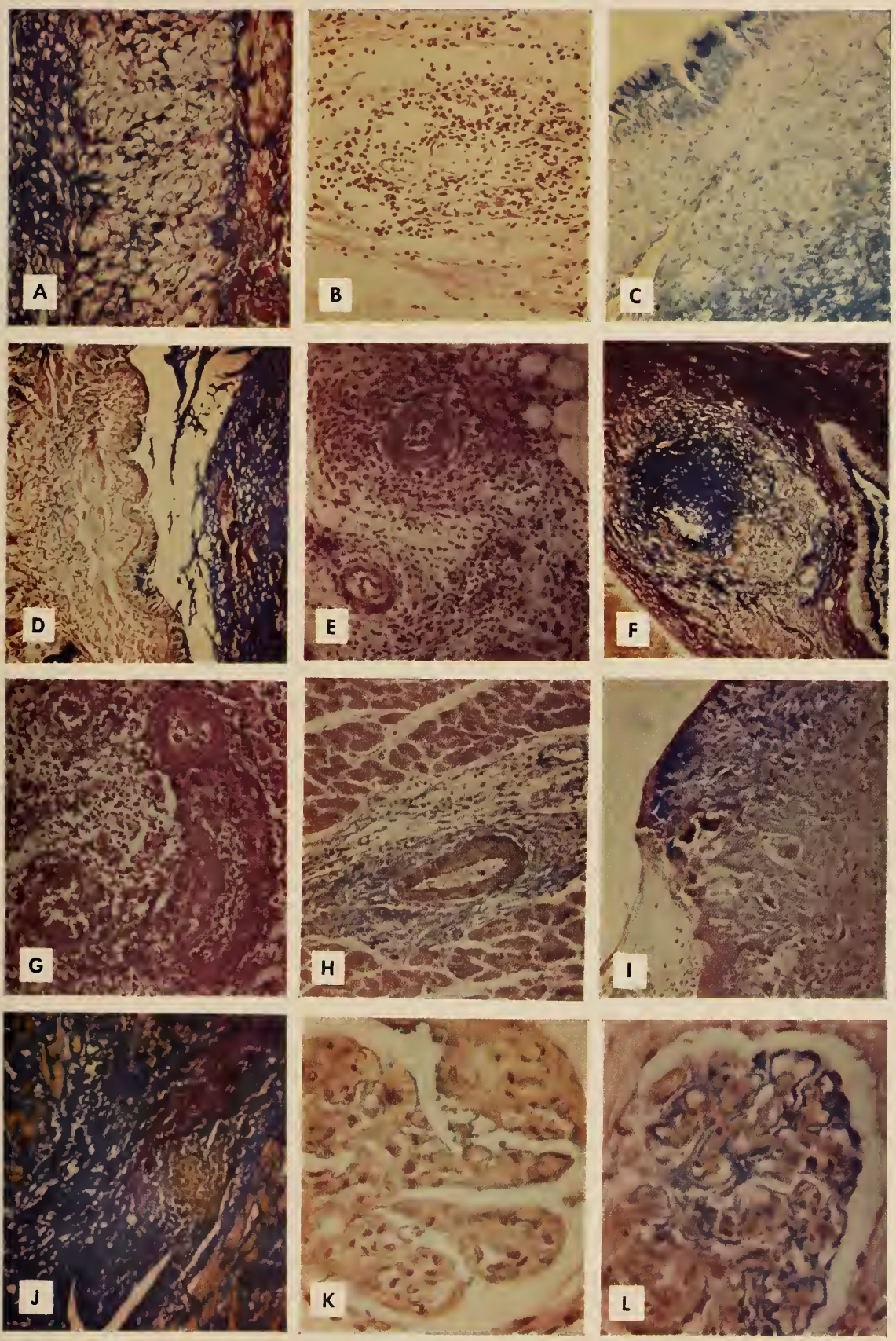
The pulse rate was 110; the blood pressure 120 mm. of mercury systolic and 72 mm. diastolic. Heart sounds were normal. The hemoglobin content and the number of erythrocytes in the blood were within normal limits. Leukocytes numbered 15,900 with 90 per cent polymorphonuclear neutrophils. Eosinophils were not present. The ascorbic acid content of the plasma was 0.32 mg. per 100 cc. No abnormality was noted in an x-ray examination of the chest. Large doses of ascorbic acid (1 gm. four times daily) were administered, beginning on the third day of hospitalization. The tempera-

Legends for Color Plate

A—An artery with changes of mild arteriosclerosis. The slightly thickened intima with excess mucopolysaccharide staining blue is at the left. The media occupies the central segment. Note the finely distributed mucopolysaccharide between muscle cells. The adventitia is composed of collagen (red) and mucopolysaccharide. Stain C.I.* ×116. **B**—Twenty-four hour allergic reaction in skin of guinea pig sensitized to horse serum. Note congestion, edema and infiltration with eosinophils. In appropriately stained sections, much mucopolysaccharide may be observed in this tissue. Stain H. and E.* ×116. **C**—Segment of nasal polyp in allergic rhinitis. Note blue mucin in epithelial cells and swelling of the ground substance in the underlying connective tissue. This tissue is infiltrated with eosinophils not well shown in this preparation. Stain C.I. ×116. **D**—Bronchus in asthma. Note excess of epithelial mucin in the lumen, thickening of the basement membrane and mucinous edema of the bronchial wall. Stain C.I. ×58. **E**—Acute arteritis in a case of sulfonamide hypersensitivity. Stain H. and E. ×116. **F**—Acute arteritis. Note excess accumulation of mucopolysaccharide in the vessel wall (blue) and so-called fibrinoid degeneration (yellow). The latter is probably fibrin. Stain C.I. ×58.

*Stains: C.I.—Colloidal iron for demonstrating mucopolysaccharides; H. and E.—Hematoxylin and eosin.

G—Arthus reaction in larynx with extreme congestion and necrosis of walls of capillaries and venules. Stain H. and E. ×116. **H**—Early Aschoff reaction in acute rheumatic fever. This is characterized by swelling of the ground substance and beginning cellular proliferation. Stain C.I. ×116. **I**—Verrucous nodule on heart valve in rheumatic fever. The heart valves normally have a high mucopolysaccharide content. In rheumatic endocarditis this substance swells; the intimal surface is interrupted and fibrin is deposited on the surface. The cells proliferate and hypertrophy, assuming the characteristic features of the rheumatic reaction. Stain C.I. ×116. **J**—Characteristic lesion of acute disseminated lupus erythematosus in the heart with prominent swelling of the ground substance (blue). A focus of so-called fibrinoid degeneration may be seen (orange-colored) just beneath the collagen (red). Stain C.I. ×116. **K**—Glomerulus in acute disseminated lupus erythematosus. The "wire loop" lesion is characterized by pronounced thickening of the basement membrane. There is also some glomerulonephritis evidenced by endothelial proliferation and duplication of the basement membrane. The surface epithelium has been largely destroyed at this stage. Stain C.I. ×350. **L**—Glomerulus in early proliferative glomerulonephritis. The surface epithelium with its mucoid cytoplasm stains blue; the basement membrane is stained orange. At the lower left, endothelial proliferation has occluded the capillary loops. Stain C.I. ×230.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ture dropped, and all manifestation of illness subsided in the next four days. (It is not known just what influence ascorbic acid had on the illness. Favorable influences of large doses of ascorbic in rheumatic fever have been reported.[13])

While skin and articular lesions dominate the clinical picture in serum sickness it is well known that significant visceral lesions may result from vascular injury. Since the early investigations by Vaubel[29] and Klinge[12] there have been numerous studies of the pathologic changes occurring in animals subjected to hypersensitivity injury by injection of foreign sera. Rich and Gregory revived interest in this field of study and reported the occurrence of periarteritis[20] and lesions bearing some resemblance to those of rheumatic fever[21] in rabbits subjected to hypersensitivity injury with horse serum. More and McLean[17] recently reported a rather extensive experimental study of horse serum injury in rabbits and cited most of the pertinent literature. In 1937 Clark and Kaplan[3] described essentially analogous lesions in two men who had received large doses of antipneumococcic (horse) serum. The most common form of vascular hypersensitivity injury observed in man is that which has been encountered since the widespread use of sulfonamides in which the antigen is probably a conjugate of blood protein and the drug. Most pathologists have observed numerous cases of this type.

In serum and sulfonamide hypersensitivity the brunt of the injury is borne by blood vessels, particularly small arteries. Lesser lesions may appear as edema of the media spreading the muscle cells apart. More severe lesions are characterized by necrosis of segments of the muscular wall with a perivascular inflammatory reaction. The injuries are varied in extent and intensity. Characteristic lesions may be seen in Figures 1-E and 1-F. A striking swelling of the mucoid ground substance will be noted in Figure 1-F. Aneurysmal dilatations with hemorrhage may or may not occur. Vascular lesions may be rather widely disseminated and consequently the clinical manifestations may point to involvement of several organs or organ systems. Spastic contraction of arteries may contribute to development of vascular lesions. Smooth muscle contraction is characteristic of certain allergic reactions. Reactions to sulfonamide are not exclusively vascular. Allen[1] drew attention to the various serious injuries that may occur in the kidney.

Arthus Reaction

At times an unusually high degree of hypersensitivity may exist in which the hemorrhagic element is prominent as is seen in the Arthus reaction. Here the injury centers in and around about small arterioles and capillaries and is associated with thromboses and hemorrhages (Figure 1-G).

Recently a case of this type, in which the sensitizing agent appeared to be penicillin, was observed:

A middle-aged white adult gave a history of rheumatic fever in childhood. During the ten years preceding the present illness he had had hay fever and for five or six years had had recurrent episodes of polyarthritis. Five months prior to hospitalization he had nephritis with albuminuria and hypertension. He had taken sulfanilamide some time prior to this. Three months after he had nephritis, a febrile illness with polyarthritis, pleuritis and pericarditis developed. The acute manifestations of this illness subsided in three days on administration of penicillin and salicylates. At that time the urine contained albumin, erythrocytes, leukocytes, and casts. In a phenolsulfonphthalein test, there was 38 per cent excretion in one hour. Administration of salicylates was continued and the patient remained in bed for about ten weeks. Three days before the patient entered the hospital, chilliness, sore throat and fever developed. Coincident with this, erythematous and bullous lesions appeared at the site of previous penicillin injections. Penicillin was again administered. Pain and fullness in the right shoulder developed rapidly, the patient had difficulty in speaking, and there was edema of the eyelids with small hemorrhagic ulcers. A few similar lesions appeared on other parts of the body. Death resulted from what appeared to be cardiac failure three days after the onset of the terminal illness.

In a postmortem examination, edema of the epiglottis and hemorrhagic edema of the false cords of the larynx were noted. The periarticular tissue and synovia of the right shoulder were edematous and hemorrhagic. Residues of the previous illnesses included pleural and pericardial adhesions and relatively small somewhat scarred kidneys. In the lesions of the skin, vocal cords and joint there was extreme vascular engorgement and hemorrhage with necrosis and thrombosis of some of the small blood vessels. A characteristic lesion from the larynx is shown in Figure 1G. Accumulation of mononuclear and polynuclear leukocytes around some of the engorged vessels indicated that there was injury and reaction in the reticular tissue around the vessels as well as of the vessels themselves. In fact, the vascular injury may have been secondary to that in the surrounding reticular tissue. The process appeared to be quite like the explosive hypersensitivity lesion known as the Arthus reaction. In the kidneys, healing lesions which were in keeping with an antecedent sulfonamide hypersensitivity injury, were observed.

This case presents several interesting aspects. The patient had a history of illnesses that either were allergic or had allergic implications. The renal disease which had caused significant impairment of function was of a type that probably had resulted from sulfonamide injury five months before. In the author's experience, severe allergic injuries of the vascular type most frequently occur in patients with an "allergic" background, and often with antecedent renal impairment. Thus the hazard of serious allergic injury with foreign sera, sulfonamides, antibiotics and other allergens would appear to be especially great in the person with history of allergic sensitivity, particularly in the presence of renal impairment.

Rheumatic fever

Since the early studies of Swift[27] a considerable body of evidence has accumulated implicating the operation of an element of hypersensitivity in rheumatic fever. Klinge[12] and his associates, and Vaubel[29] and Junghans[10] reported that in rabbits subjected to repeated doses of horse serum, lesions resembling those of rheumatic carditis developed. This work was extended and reviewed by Rich and Gregory.[21] It is likely that an allergic element contributed to the carditis which Rinehart and Mettier produced in guinea pigs by subjecting them to the combined influence of scurvy and infection with beta hemolytic

streptococci.[25] While it is believed that the scurvy conditioned the connective tissues and altered their reactivity, the deficiency also impaired the localization of the infection and probably permitted greater and more prolonged absorption of antigenic substance. Immunological studies[4, 18] indicated heightened antibody responses in the rheumatic subject. It is well recognized that lesions of periarteritis may occur in rheumatic fever.[6, 21] This is one of the evidences implicating an allergic influence in the disease. The rheumatic inflammatory reaction is characterized by a particular type of proliferative reaction in the heart valves and in the reticular connective tissue surrounding small twigs of the coronary arteries. The size and cytologic features of the reactive cells make the Aschoff body quite a distinctive lesion. In its early and fully developed phase there is an excessive accumulation of a mucopolysaccharide. Talalajew[28] first drew attention to mucinous edema at the site of the developing Aschoff body. Such a lesion is shown in Figure 1-H. The verrucal lesions of the heart valves develop at the lines of closure. The heart valves normally contain a high component of mucopolysaccharide. The verrucal lesions appear to involve a swelling of this material accompanied by loss of surface endothelium and the deposition of fibrin (Figure 1-I).

Acute disseminated lupus erythematosus

Another "rheumatic" disease that warrants consideration in this connection is acute disseminated lupus. Characterization of this disease has largely developed from a series of studies by Baehr and Klemperer[11] and their associates at the Mt. Sinai Hospital. The basic nature of this disease is not clear although there is sufficient evidence for strong suspicion that elements of hypersensitivity operate in its pathogenesis. It is a widespread, commonly fatal disease with a predilection for women in the childbearing period. Lowering of the plasma albumin and elevation of globulin reflect a profound metabolic disturbance. Anemia, leukopenia and thrombopenia are frequently present. Erythematous and hemorrhagic skin lesions are commonly present. Particularly characteristic is the "butterfly" erythema across the bridge of the nose. Arthritis and serositis are frequent manifestations. Renal injury is manifest by proteinuria and by the presence of mixed cellular elements and casts in the urine. Recently an element has been found in the blood which causes clumping of leukocytes and degenerative changes in nuclear structure.[8] The pathologic changes are widespread, involving particularly the skin, heart, kidneys, joints, pleural and pericardial surfaces. Degenerative and proliferative lesions often associated with thromboses are observed in many small blood vessels. In the kidneys the characteristic hyaline thickening of the basement membrane which has been aptly designated as the wire loop lesion (Figure 1-K) may develop. In some cases there may also be endothelial cell proliferation in the glomeruli[1] quite like that which occurs in glomerular nephritis. In about 20 per cent of cases the distinctive lesion known as nonbacterial thrombotic endocarditis is present. Small sterile thrombotic masses occur along the line of closure of the mitral valve and are commonly found attached to the mural endocardium. While endothelial and vascular lesions are widespread there appears to be a degenerative change in some connective tissue sites which cannot be readily explained on the basis of vascular or endothelial injury. Klemperer expressed the belief that there is a physicochemical alteration in collagenous tissue, probably primarily in the ground substance which constitutes the basic lesion. This he called fibrinoid degeneration. Altschuler and Angevine[2] drew attention to the finding of metachromasia (the staining property of ground substance) at sites of so-called fibrinoid degeneration. Studies by the author bear this out. While agreeing that there is probably a basic defect in the interfibrillar element of collagenous structures, the author is of the opinion that the brilliant eosinophilic staining property which characterizes the so-called fibrinoid degeneration is the result of seepage of plasma protein into the tissue and the consequent deposition of fibrin. A characteristic lesion is shown in Figure 1-J. There is a prominent increase in mucopolysaccharide (blue) with an associated focus of so-called fibrinoid degeneration (orange).

Other diseases with allergic implications

There is substantial evidence that glomerulonephritis may be produced by allergic injury.[14] It would appear significant that the cytoplasm of the glomerular epithelium contains a substance which reacts as a mucopolysaccharide by the histochemical technique employed in this study. The basic reaction in glomerulonephritis involves proliferation of the glomerular endothelium (Figure 1-L), and at times proliferation of the glomerular and capsular epithelium. Buerger's disease is commonly associated with superficial thrombophlebitis as well as involvement of the larger arteries, veins and perivascular tissue. The association of this disease with tobacco smoking seems well established. The lesion in temporal arteritis appears to be fundamentally similar to that of periarteritis. There are several suggestive evidences that rheumatoid arthritis may involve allergic mechanisms. One of the evidences is the occasional finding of associated acute arteritis. Mild obliterative endarteritic changes are more frequent. Space will not permit a detailed discussion of these problems.

DISCUSSION

While there is no question of the dominantly allergic nature of urticaria, hay fever, eczema, asthma and the arteritis of serum sickness or sulfonamide hypersensitivity, the extent of the allergic influences in the other diseases noted is not clearly defined. It is of interest that the classic allergic diseases as well as the systemic diseases with prominent allergic implications occur in sites where mucopolysaccharides are normally present, and the reaction involves swelling of these substances. Thus the reactions in urticaria and eczema develop in the subepidermal

reticular tissue which is richly supplied with mucopolysaccharide. In asthma, there is swelling of the subepithelial mucopolysaccharide and of that which lies between muscle cells. In the arteritis of serum or sulfonamide injury, the reaction occurs in the periarterial tissue and between the muscle cells of the vessel wall which are normally bound together by a mucoid ground substance. In glomerulonephritis the mucoid material of the glomerular epithelium is in intimate relationship with underlying proliferating endothelium. The sites of dominant injury in acute disseminated lupus erythematosus and rheumatic fever are sites at which mucopolysaccharide is normally concentrated, notably the skin, synovia, heart valves and the perivascular stroma of the heart muscle. The lesions characteristically involve a swelling of these substances. The idea naturally suggests itself that the mucopolysaccharides of the connective tissues may be the intimate locus of the allergic reaction. It is possible that antibody (and in some instances, antigen) may be attached to the mucopolysaccharides. Further study will be essential to evaluate this thesis.

The work of Meyer[16] indicates that the exact chemical structure of connective tissue mucins is varied in different sites. It is possible that chemically different mucopolysaccharides have varied affinity for different antigenic substances. The composition and physical properties of these substances are also dependent upon nutritional influences. Rinehart and Greenberg[24] recently showed that pyridoxine deficiency in the rhesus monkey led to deterioration and swelling of the mucoid materials in arteries with development of lesions closely similar to those of human arteriosclerosis. Ascorbic acid deficiency impairs the formation of the mucopolysaccharide in association with collagen. The author previously presented substantial evidence that nutritional influences, particularly deficiency of vitamin C, may be contributory to the pathogenesis of rheumatic fever.[22] Thus, metabolic conditioning influences may be important in predisposing to allergic injury and modifying the response of the tissues to the injury.

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Intensive X-Ray Survey for Tuberculosis in a Rural County

Waldo R. Oechsli, M.D., *Los Angeles*, Harry Cohn, M.D., *San Diego*, C. R. Kroeger, M.D., *El Centro*, and Antonio A. Adames, M.D., *Holtville*

SUMMARY

In an intensive fast-tempo tuberculosis case-finding survey in a rural county 34,345 residents (73 per cent of all persons 15 years of age or over) had miniature x-ray films of the chest taken. In 256 instances, x-ray findings were consistent with pulmonary tuberculosis. Sixty-eight persons were ultimately reported as having active tuberculosis (one case of active tuberculosis for every 505 persons covered by the survey). Within one year, 57 of them had been hospitalized for treatment. Only four of the 68 cases had been known to the health department before the survey.

The cost of the survey (80 cents per person surveyed and $444.58 per case of active tuberculosis) compares favorably with that of other surveys.

THE control of tuberculosis in a community necessitates, as a first step, knowledge of the extent of the problem and identification of the persons who have the disease. Because of the relative or complete absence of symptoms in early active tuberculosis, mass x-ray survey is an effective and necessary tool in the tuberculosis control program.

Although, in the past, tuberculosis has taken its greatest toll in urban populations, evidence is accumulating that the death rate from tuberculosis in cities has declined much more rapidly than in rural areas.[3] It has even been predicted that urban death rates may eventually drop below rural rates. This trend underlines the need for rapid betterment of health services in rural areas, including more active case finding, follow-up and hospitalization, as well as improvement in rural housing, education, nutrition, and general living standards.

Imperial County, one of the important rural, agricultural areas along the southern border of California, has a population of 62,975.* High tuberculosis mortality rates and a high ratio of far advanced cases reported annually have, for years, indicated that a considerable reservoir of infection existed within the county. Chest clinics were conducted monthly by visiting specialists, but case-finding programs had been limited to several small scale surveys covering only about five or six per cent of the eligible population. The facilities for the care of tuberculous persons were limited to a 22-bed ward at the county hospital. At every chest clinic, the diagnosis of new cases of tuberculosis was met by the discouraging fact of insufficient beds in which to place the patients. About half of all known deaths from tuberculosis, over a five-year period, occurred in the home and 60 per cent of the persons who died of tuberculosis were not reported as having the disease prior to death. It was significant that 65 per cent of the deaths were among Spanish-speaking people, although only 35 per cent of all the people in the county are Spanish-speaking.

For over a decade, the serious nature of this community problem had impressed itself upon the Imperial County Board of Supervisors, the Imperial County Tuberculosis Association, the county health officer, and the civic leaders in the county. World War II, however, prevented crystallization of plans for the improvement of these conditions. In November 1948 the board of supervisors secured the former naval auxiliary air station. It was converted into a tuberculosis hospital of 195 beds and staffed by two full-time tuberculosis specialists, a visiting tuberculosis consultant and a visiting chest surgeon.

With an adequate number of beds for persons with tuberculosis thus provided, attention was centered on a more complete tuberculosis control program in the health department. Upon the arrival of a new full-time health officer in 1949, tuberculosis was given first priority among many knotty public health problems. A request by the health officer for assistance in conducting an intensive county-wide x-ray survey was approved and sponsored by the Imperial County Medical Society, the Imperial County Tuberculosis Association, and civic organizations. The California Department of Public Health and the California Tuberculosis and Health Association agreed to furnish the necessary equipment and personnel.

The local health and welfare council acted as a steering committee and aided in the formation of the Imperial County Chest X-ray Survey, which then functioned under an executive coordinator. Medical, nursing, and social service policies were determined by local committees.† Funds were secured by appropriation by the board of supervisors, the Imperial County Tuberculosis Association, and by public subscription. The locations committee arranged a schedule for placement of x-ray units in every com-

Roentgenologist, California Department of Public Health, Los Angeles (Oechsli); Assistant Director, Vauclain Home, San Diego (Cohn); Health Officer, Imperial County, El Centro (Kroeger); Director, Imperial Valley Tuberculosis Sanatorium, Holtville (Adames).

* U. S. Department of Commerce, 1950 census.

† Organization of the survey was directed by Edward Kupka, M.D., chief of the Bureau of Tuberculosis Control, California Department of Public Health.

munity in the county. An extensive volunteer canvassing committee, armed with this schedule and with information answering possible objections and questions, contacted every home in the county, "selling" the survey by direct personal presentation. A high-pressure publicity campaign was carried out preceding and during the survey, using radio, press, sound equipment, and every other available medium of publicity. The negative aproach, emphasizing fear of tuberculosis, was avoided. Other committees organized activities in the schools, business, industry, and agricultural groups. The entire organization was, in every sense, the expression of the desires of the community, and the success of the survey was largely the result of the work done by those in every level of community life who were willing to put time and effort into the task to be accomplished.

Because of the importance of giving the subjects prompt notification of the results of the miniature films, the reading of the films was expedited from the start of the survey; within a week of the taking of the x-ray, either a negative report card or a letter of appointment for a confirmatory large film was in the mails. Persons for whom treatment was urgent were notified directly by a public health nurse.

The procedure for follow-up, as determined by the medical committee, was to take a confirmatory, large film at the retake center in all cases in which the reading of the miniature film suggested pulmonary tuberculosis or significant non-tuberculous conditions. In order to avoid neglect on the part of the patient to follow through in what might prove to be symptomless, active tuberculosis, the medical committee also desired that every effort be made to reach a satisfactory conclusion within a minimum period of time. In line with this policy, a tuberculosis clinician was on duty continuously at the retake center. As soon as the 14 x 17-inch x-ray film was taken, the clinician reviewed both the miniature film and the large wet film. With the information furnished by the epidemiological history taken by one of the clinic nurses and by consultation with the patient, it was possible in many cases to reach at once a tentative conclusion. Thus, it was possible, immediately, to relieve the minds of some persons with the information that in the large films there was no evidence of tuberculosis. If changes consistent with presumably active tuberculosis were observed on the film, the patient was informed of the findings, was instructed as to collection of sputum for examination, and was advised of the probable need of treatment. At the direction of the health officer, some of these patients were referred directly to the social welfare department for investigation of the financial status in anticipation of admission to the sanatorium, and a considerably larger group were advised to secure further examinations either by their own physicians or at the chest clinic. In instances in which there was a history of tuberculosis many years ago and the present findings indicated an obsolete tuberculous lesion with complete absence of symptoms, the subject was informed of the findings and dismissed with the advice that in the event of recurrence of any symptoms, medical aid should be sought.

If the miniature film was suggestive of some non-tuberculous pulmonary disease and there were sufficient indications in the large film, or if symptoms were present, the subject was referred to his own physician for further investigation. The miniature or large film was made available to the physician in each case, together with other information contained in the records. Persons in whom heart disease was suspected also were referred to their physicians, without 14 x 17-inch films.

RESULTS

Over a period of nearly seven weeks, with a total of 109 unit-days, the team operating the three mobile x-ray units took a total of 37,934 miniature x-ray films, an average of 348 per unit per day. Of the total number of persons surveyed, 3,589 lived outside of Imperial County; over two-thirds of these had come over the border from Mexico for the x-ray survey. The remaining 34,345 were either legal residents of Imperial County or Mexican nationals regularly employed in the county. It is estimated that 75 per cent of the total population—47,231 persons—was made up of people 15 years of age or over. The 34,345 residents surveyed, therefore, represented 73 per cent of the eligible resident population.

In the total of 37,934 miniature films, there were 859 in which there was indication of disease in the chest—of pulmonary tuberculosis in 572 instances (1.5 per cent). Of the 572 persons with suspicion of tuberculosis, 527 reported at the retake center for a large film and examination. The other 45 either could not be located or were referred to other health jurisdictions because they were non-residents.

On the basis of the examination at the retake center, a tentative diagnosis of pulmonary tuberculosis was made in 256 cases and, of these, 68 were ultimately reported as cases of active pulmonary tuberculosis by private physicians, by physicians at the chest clinic, or by physicians at the sanatorium, and 57 of the patients were hospitalized for treatment—51 in the Imperial Valley Sanatorium and the remainder in private or government sanatoria. Only four of the 68 reported cases had been known to the health department before.

Of the 51 patients hospitalized in Imperial Valley Tuberculosis Sanatorium, 43 (84 per cent) had tubercle bacilli in the sputum. Thirty-one (61 per cent) were of Spanish-American descent (of whom

TABLE 1.—*Miniature Film Findings—Imperial County Survey, December 1949 to January 1950*

		Number	Pct.
Total number of persons in survey		37,934	
Essentially normal films		37,075	97.7
Possible abnormal chest conditions:			
A. Suspected pulmonary tuberculosis	572		
B. Suspected cardiovascular disease	151		
C. Suspected other disease	136		
		859	2.3

TABLE 2.—*Confirmatory (14x17-inch) Films—Imperial County Survey*

Number of Imperial County residents in survey		34,345
Number of confirmatory (14x17-inch) films		527
Number with x-ray impression of pulmonary tuberculosis:		
Minimal pulmonary tuberculosis	169	
Moderately advanced pulmonary tuberculosis	59	
Far-advanced pulmonary tuberculosis	28	
		256

TABLE 3.—*Disposition of Tuberculous Patients—Imperial County Survey*

Hospitalized		57
Imperial Valley Tuberculosis Sanatorium	51	
Other California sanatoria	6	
Returned to Mexico		35
Referred to private physicians or chest clinic for further study and treatment		112
Dismissed as disease was presumably inactive		52
Total		256

TABLE 4.—*Admission and Discharge Data—Imperial County Tuberculosis Sanatorium*

Extent of Lesion	Admission (to Dec. 31, 1950) Male	Female	Total	Discharge (to Dec. 31, 1950) Male	Female	Total
Minimal	3	2	5	1	1	2
Moderately advanced	21	11	32	4	0	4
Far advanced	11	1	12	1	0	1
Meningitis	0	1	1	0	1	1
Observation	0	1	1	0	1	1
	35	16	51	6	3	9

21 were born in Mexico), 17 were native-born white, two were Filipino, and one a Negro. Only three had been residents of California less than five years. Nineteen were engaged in some type of agricultural work; 11 were housewives. Males outnumbered females by more than two to one. Thirty-two were over 40 years of age.

During 1950, eight patients were discharged from the Imperial County Tuberculosis Sanatorium, and one died. The patient who died, a woman, had tuberculous meningitis at the time of admission. One patient was discharged as non-tuberculous. The rest were either transferred to other institutions or left against medical advice. Because of the comparatively short period of time since their admission, no patients have been discharged as having inactive or arrested tuberculosis.

A phase of the tuberculosis control program which constitutes an especially difficult problem in Imperial County is the ease with which citizens of Mexico can cross the border.[1] Since 1945, no fewer than 45,000 "crossing cards," which permit the holders to enter the county from Mexico for employment by the day or for business purposes, have been issued. The state of health of the holders of these cards is not investigated. The importance of this practice to the health of Imperial County residents can be judged by the results of a spot check of 2,556 miniature x-ray films taken in Calexico, near the border. Forty-seven per cent of the subjects gave Mexicali as their home address. In 4 per cent of the miniature films of Mexicali residents, abnormalities consistent with pulmonary tuberculosis were noted, compared with 2.4 per cent with regard to residents of Calexico. It has been suggested that some of the Mexicali residents crossed the border for confirmation of an earlier diagnosis made in Mexicali, but the important facts remain that they were able to cross the border freely, and that those with active tuberculosis thus constitute a health hazard to persons with whom they may come into contact in Imperial County.

COST

The cost of the survey was $30,230.46, of which 67 per cent was borne by the California Department of Public Health and the California Tuberculosis and Health Association, and 33 per cent locally. One-third of the local cost was carried by the Imperial County Tuberculosis and Health Association, and a little over one-third by the Imperial County Health Department, and the rest by public contributions and donations by the cities of El Centro and Calexico, labor unions, and others. Nearly half of the local health department expenditure was for regular personnel, assigned to the survey. The services of the large number of volunteer workers, without which the survey would have been impossible, are not included.

The total cost per person covered by the survey was 80 cents (of which the local share was 26 cents). The cost per person with a presumptive (x-ray) impression of pulmonary tuberculosis was $118.09, and the cost of finding each of the 68 reported cases of active tuberculosis was $444.58. The cost per patient hospitalized was $530.36. These figures compare favorably with results elsewhere. For instance, in the Seattle survey, the cost per active case discovered was $685.[2]

DISCUSSION

The policy laid down by the local medical committee whereby every person who had a confirmatory film was interviewed by a physician at the time the retake x-ray was made, proved to be very efficient. Not only was the need for an additional visit done away with in most cases, but there was a psychological advantage in discussing with the individual, at the time his interest was greatest, the question—what needs to be done? A complete, final clinical evaluation still was necessary, of course, but a valuable start was made and, in some cases of obviously active advanced disease, hospitalization was effected in a very short time. In the majority of instances, the patient was referred to a private physician or the chest clinic for study and evaluation, with treatment or referral to the sanatorium.

Beyond the results of the survey in the number of cases of previously unrecognized tuberculosis discovered and the number hospitalized, other assets

were apparent. The survey indicated the need for improvement in the control of those with active tuberculosis crossing the border, whether they are so-called "nationals," who enter the United States under well-defined contract, or residents from across the border who carry a "crossing card," or illegal entrants.

The effect of the survey was agreeably apparent in increased interest in tuberculosis during the following year. One evidence of this interest was an awareness of the cost of the entire tuberculosis program, resulting in an investigation into the costs of treatment. The end result was that those who at first complained of the cost became firm supporters of the sanatorium and of the board of supervisors in their wise provision for adequate care of persons found to have active tuberculosis. There was also a well-defined increase in interest on the part of the public at large in the health program of the county, not only in tuberculosis but in other fields as well. Finally, in the year following the survey, there was an increase in the investigation and diagnosis of diseases of the chest, particularly tuberculosis, as compared with the pre-survey period. In most cases in which tuberculosis was diagnosed in the year following the survey, the patient had not been included in the survey. In several instances, however, the patient had had a survey film and a "negative" report upon it. In those instances, comparison of the more recent film with the survey miniature film indicated that the disease was new, that the miniature film taken in the survey was really "negative." All of these benefits, often considered as secondary to case-finding, are of sufficient value in themselves to justify the expense and effort put forth in carrying out such a survey.

703 California State Building, Los Angeles 12.

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Surgical Principles of Incising the Renal Parenchyma

GEORGE L. TORASSA, M.D., *San Francisco*

SUMMARY

Attention, at nephrotomy, to the anatomy of the kidney will guide incision into a less vascular area and will result in less destruction of tissue. Complete exposure and gentleness of control of the renal pedicle are mandatory. Conservative surgery—removing renal lesions and preserving the remaining functioning tissue — is successful when the proper techniques of incision and hemostasis are employed. With proper drainage and control of infection, nephrostomy is not necessary. Three illustrative cases are presented.

Full use of the operating room x-ray machine is helpful. Mattress sutures in the plane of the arteries is the commonest method of parenchymal hemostasis. Although helpful, Gelfoam® and Oxycel® probably predispose to infection which is the commonest cause of secondary hemorrhage.

TO all who perform renal operations the principles of incising the renal parenchyma are of vital importance. Yet these principles receive far too little consideration. Viewpoints differ widely regarding the indications for nephrotomy, the methods of making the incision and the technique of obtaining hemostasis. The ideal renal opening should damage the kidney as little as possible, and the closure of the wound must obtain complete hemostasis with little or no destruction of renal parenchyma. Although these two criteria cannot always be met, constant attention to the vascular supply of the kidney, the lesion present and its position in the renal substance, and the judicious use of hemostatic methods, drainage, and antibiotics will help to conserve renal tissue and accomplish good hemostasis.

The brisk bleeding encountered with parenchymal incision has led to discard of the idea of the "bloodless line." However, such is the vascular anatomy of the kidney that there is definitely a line along which less arterial bleeding will be encountered.

ANATOMY

The renal pelvis is either single or bifid, and extrarenal or intrarenal. With the bifid pelvis a wedge of cortical substance extends between the upper and middle calyces. The longitudinal axis of the pelvis runs from the posterior surface of the kidney obliquely to the outer third of its anterior surface.

The renal artery lies superior to the vein, passes behind the vena cava on the right, and lies behind the vein on the left. The right artery is usually superior to the left. The renal arteries are true end-arteries. They radiate from the hilus in a fan shape, and occlusion or destruction of the main branches at the hilus, or near their origin, produces gross destruction of renal substance. The arteries that enter the parenchyma anterior to the pelvis remain anterior until the capsule is reached, and the posterior arteries remain posterior.

In corrosion specimens the anterior and posterior arterial trees can be separated without damaging either. The line of division is the so-called "bloodless arterial line." The veins follow the course of the arteries, but there is free branching and anastomosis and, therefore, no bloodless venous line.

Normally, with a posterior renal pelvis three-quarters of the arterial supply is from the anterior arterial branches and one-quarter from the posterior arterial tree. The upper and lower renal poles are supplied by the anterior arterial branches, and the posterior arterial supply covers only the posterior three-quarters of the renal parenchyma. The arterial division is dependent on the position of the pelvis, and the line of division follows the pelvic

Figure 1.—Longitudinal axis of "normal" pelvis running obliquely from inferior pole to anterior portion of superior pole.

Presented before the Section on Urology at the 80th Annual Session of the California Medical Association, Los Angeles, May 13-16, 1951.

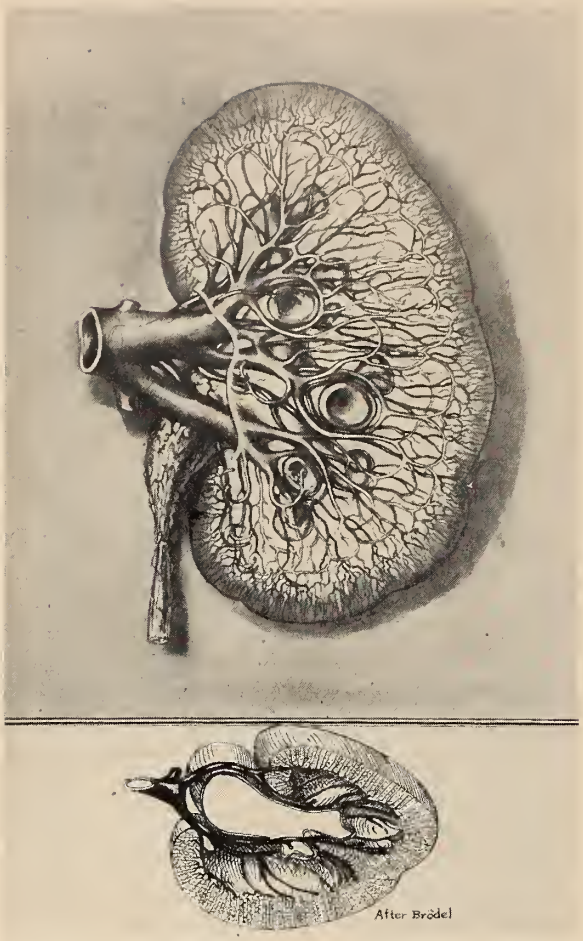

Figure 2.—Arterial and venous circulations of kidney. Note anastomosis of veins around calyces and true end-organ nature of arteries in cross section.

axis. This division usually is 1 cm. posterior to the lateral convex border. If the pelvis is anterior, the posterior arteries predominate and the line of arterial division is anterior to the lateral convex border. If the pelvis is mesial the line of arterial division is in the midline, with the lower pole always supplied by the anterior arterial tree.

With a bifid renal pelvis, the anterior arterial branching may send large vessels to the posterior parenchyma, thereby excluding any possibility of a bloodless line.

Because of the numerous variances from the norm of three-quarters of the arterial supply being anterior and one-quarter posterior, it is easy to understand why the bloodless line is considered a will-o'-the-wisp. However, mere attention to simple anatomic facts may help to guide the surgeon to a less arterially vascular area. Aberrant vessels may simplify or complicate the picture, but the area of parenchyma supplied by each vessel may be readily ascertained by simple digital compression.

INCISION

With exposure of the kidney the disease process present of course dictates the area of incision.

The *sine qua non* of renal parenchymal incision is that the vascular pedicle should always first be mobilized and available to immediate pressure control before the parenchyma is opened. If it is necessary to control hemorrhage by compression of the renal pedicle, the methods of choice are soft rubber catheter constriction, digital compression and rubber-shod clamp compression. When using catheter control, great care should be taken not to twist the vessels. Compression of the pedicle with the fingers is kindest to the pedicle but leaves less room for operative procedures. Rubber-shod clamp compres-

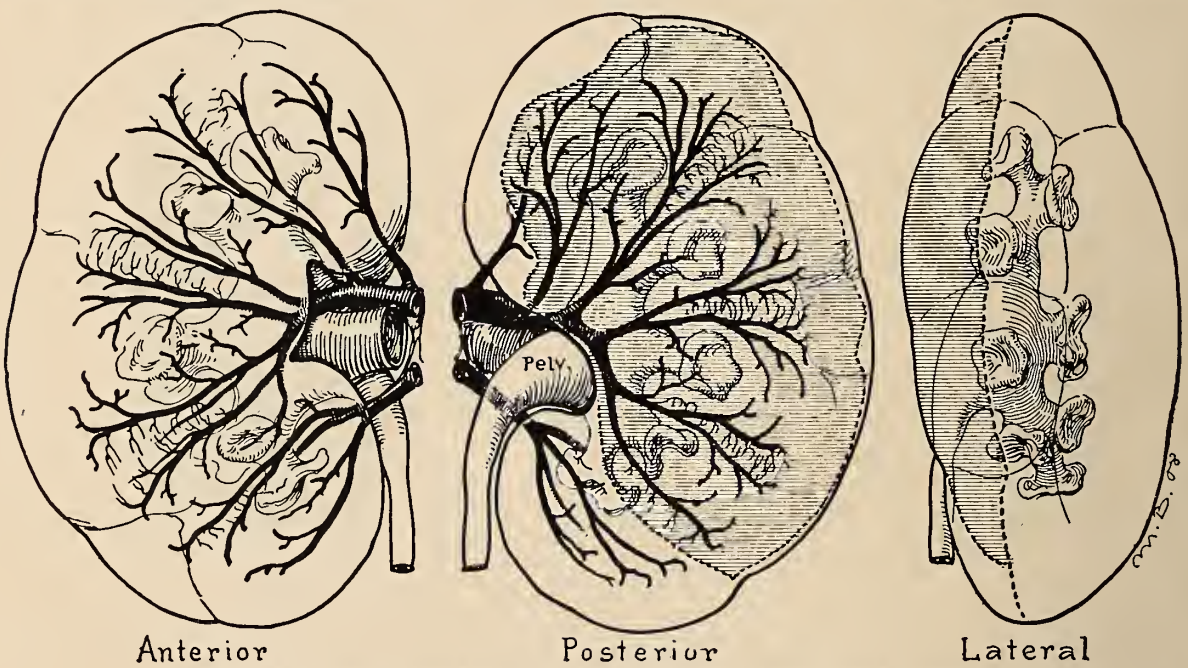

Figure 3.—Division of anterior and posterior arterial trees in "normal" kidney.

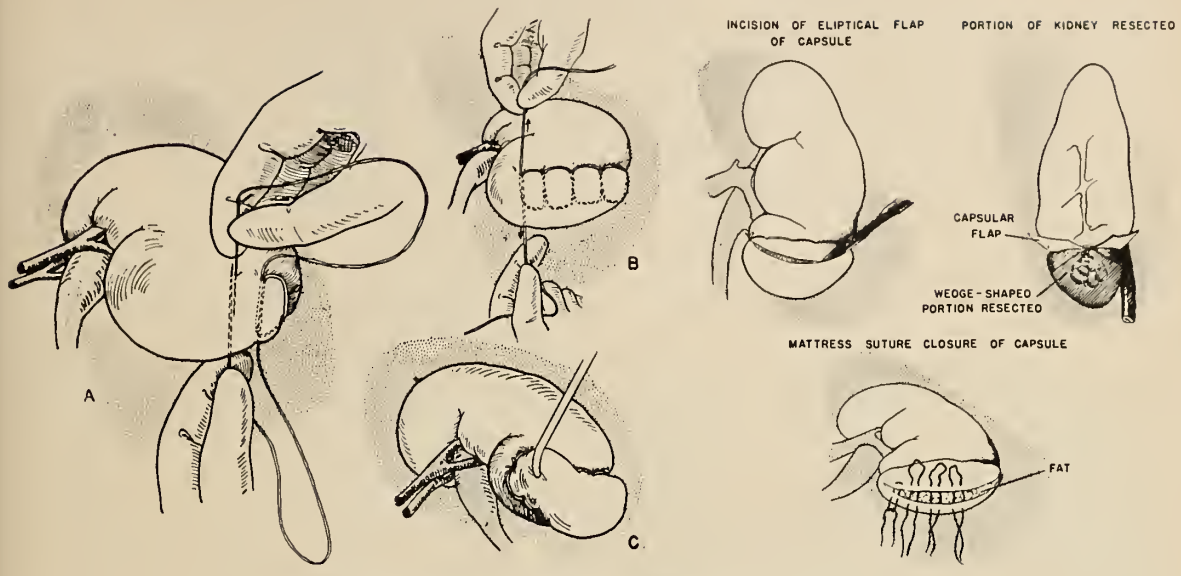

Figure 4.—Technique of Engel for resection of the renal pole.

sion is effective but subjects the pedicle to more than a little trauma. The work of Schiebe, Giraldi and Vermulen[9] has shown that the pedicle may be clamped probably for up to 30 minutes without demonstrable renal damage. Obstructing the vein alone produces the greatest renal damage because the kidney becomes engorged. The artery alone may be compressed with no ill effect. During pedicle control, if the parenchyma becomes dusky and the kidney engorged, it is evident that the venous return has been impeded, but that the arterial flow has not. This should be immediately corrected by applying greater force in pedicle control to prevent the damage resulting from impaired venous return.

If it is necessary to incise a solitary kidney, rubber-shod clamp control of the pedicle should never be used. The danger of thrombosis of the pedicle is very real, and the increased trauma due to the clamps unnecessarily adds to the risk of the procedure. Digital pressure is by far the safest method of control with the solitary kidney, and, if the extra hands in the wound do not prolong the procedure, this type of pressure should be used.

There is now a commendable trend toward the preservation of kidney tissue. Heminephrectomy for superior or inferior pole lesions such as stone in dilated calyces with strictured infundibula, calyceal diverticula and even tuberculosis is being done with success, not to mention Vermooten's[10] partial resection of a kidney for carcinoma. Heminephrectomy, after the method of Engel,[2] for a stone in a strictured calyx may, in the solitary kidney, be less traumatic than pedicle constrictions and nephrotomy and nephrostomy. When this technique is used, it is not always necessary to apply pedicle control. The cobbler's stitch gives adequate gross hemostasis.

With small stones and intraparenchymal lesions, stereoscopic and oblique films and any other informative method at hand must be utilized in an attempt to determine the exact site of the lesion before operation. If the small lesion be radiopaque, the operating room x-ray machine should be used freely. This will help in pinning down the trouble and will minimize the amount of parenchymal dissection necessary to accomplish the aims.

Resection of lesions bedded within the mid-portion of the kidney is a relatively simple procedure. The kidney is first well mobilized and the renal pedicle controlled with a soft rubber catheter. The mid-renal lesion is then best removed by sharp dissection with a scalpel. The electrocautery blade can be used, but burn hemostasis leaves behind sloughing renal tissue with the excellent chance of secondary hemorrhage, fistulae, infection and the increased loss of renal tissue. The resultant defect can be obliterated by approximation of the wound edges or, if too great, can be filled with fat or Oxycel.® If any portion of the lesion, such as a calyceal diverticulum, communicates with the renal pelvis, so that there is a free exchange of urine, reasonable care should be taken in obliterating the communication with a purse-string 4-0 chromic or plain gut suture in order to do away with one more possible cause of urinary fistula. If the papilla of the excised wedge of parenchyma is not adequately obliterated, the danger of fistula formation will be increased.

Following are three illustrative case reports:

CASE REPORTS

Case 1: The patient was a 73-year-old woman with a solitary kidney and large pelvic stone. At operation an unsuspected neoplasm was observed. Locally, it appeared to be confined to the superior pole, and electrocautery dissection of the lesion was done. The patient died two months later of uremia. At autopsy chronic pyelonephritis was noted. It cannot be stated whether the amount of renal tissue that remained after operation was adequate for survival. Certainly, electrocautery dissection destroyed more tissue than scalpel dissection would have.

Cases 2 and 3 are almost mirror images. Both patients were men 50 years of age, and both had calyceal diverticula, or hydrocalycosis with stones. In Case 2 the lesion was opened, the stones removed and the point of communication with the renal pelvis fulgurated and then closed with a purse-string 4-0 atraumatic chromic suture. The roof of the cystic area was resected and the parenchymal walls were fulgurated. The dead space was then obliterated with fat and mattress sutures.

In Case 3 the entire lesion was removed with the scalpel. The remaining cavity was handled in the same way as in Case 2.

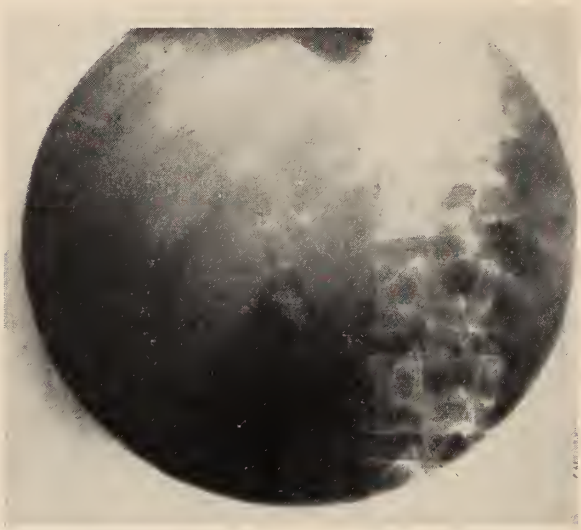

Figure 5 (Case 2).—Communicating calyceal diverticulum with stones.

With questionable renal neoplasms, Weyrauch and co-workers[11] have shown that, after control of the pedicle, it is permissible to cut down directly upon the lesion and obtain a specimen for biopsy and frozen section. This is in contradistinction to the time-honored dictum that nephrectomy should be done if there is any reasonable suspicion of neoplasm.

In cases of staghorn calculus, posterior pyelotomy with gentle exploration of the pelvis and calyces is advisable. In some instances, if the stone is not excessively branched it can be extracted in toto through the pyelotomy. If the pelvis is intrarenal or if the surgeon prefers incision of the parenchyma, incision is best made from within the pelvis outwardly, in the region of the "bloodless line." A curved blade or wire or chromic gut on a large curved needle is satisfactory. The within-outward incision is the best way of attempting to utilize the end-arterial nature of the renal arteries for the surgeon's needs. The within-outward wounding is most likely to tend to separate the anterior and posterior arteries.

With isolated stones, direct incision over the calculus is the most appropriate and quickest method of extraction.

With incision into the renal parenchyma when gross infection is present, the question of nephrostomy or pyelostomy arises. If drainage is adequate without a nephrostomy tube, nephrostomy need not be considered. If adequate drainage seems unlikely in the immediate postoperative period, nephrostomy is in order. The nephrostomy may enhance deep-seated pyelonephritis about the tube, and therefore

Figure 6 (Case 3).—Communicating calyceal diverticulum, preoperative and postoperative films. Note normal appearance of postoperative kidney.

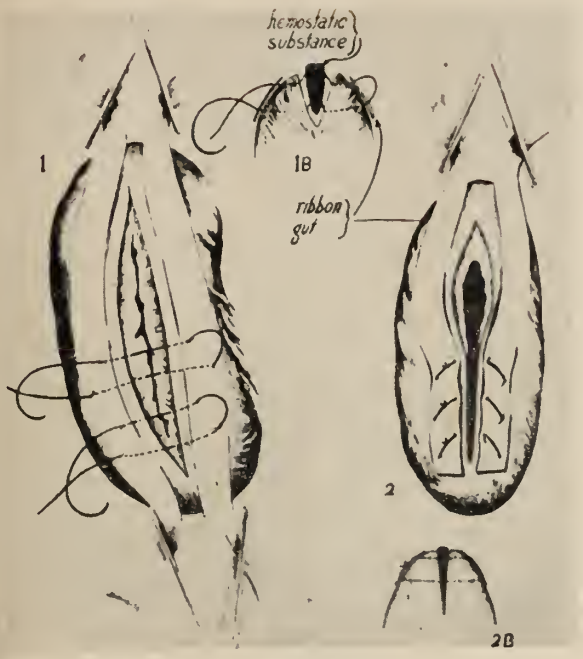

Figure 7.—Technique of Dorsey for anatomic application of mattress sutures in the plane of the arteries.

if the extrarenal pelvis is adequate, pyelostomy is much kinder to the parenchyma. The fact to remember is that infection with improper drainage, not nephrostomy or incision into the parenchyma, is the most common cause of secondary renal hemorrhage. Deep mattress sutures should not be placed about a nephrostomy tube, because the necrosis of tissue is too great and secondary bleeding may result when the tube is removed. Only capsular sutures should be used to fix the catheter in place.

HEMOSTASIS

Once the parenchyma has been incised and the problem at hand settled, the question of hemostasis arises. The method of controlling bleeding in which the least amount of tissue is destroyed is obviously the best. A myriad of methods have been devised, the reason being that no one technique of renal parenchymal hemostasis is satisfactory in all instances.

Simple mattress suture at right angles to the renal wound is the oldest and commonest manner of achieving effective hemostasis. The hemostatic retroperitoneal fat or muscle is commonly used between the wound edges in this and all other techniques of wound approximation in renal operations. The fat becomes incorporated in the scar and does not act as a foreign body.

The very real objection to the usual kind of mattress suture through the parenchyma is the end-artery nature of the renal arterial tree. The closer that deep mattress sutures, at right angles to the arterial tree, are placed to the hilus the greater the amount of renal tissue completely deprived of any further arterial circulation. These mattress sutures, which cut across the end-arteries, should be reserved for the capsular and subcapsular portions of the kidney.

If mattress sutures are to be used deep in the parenchyma, the technique of Dorsey[1] is the best. Dorsey uses ribbon gut to prevent the sutures from tearing through, and then places the sutures in the plane of the vessels, so that good approximation is achieved without obliteration of the circulation.

No. 00-000 chromic gut is heavy enough for all mattress sutures. If the renal pelvis is opened, 0000 chromic or plain gut is used for closure. The parenchyma is then approximated over fat with linear mattress sutures. No. 000 continuous plain gut is satisfactory for the capsule.

Hess and co-workers[5] carried out partial renal resection without the aid of sutures in three cases. Fat or muscle was held against the cut surfaces and bound in place with unrolled sheets of Oxycel. A simple hot pack and digital pressure with approximation of the wound edges provides very effective hemostasis.

Lowsley's subcapsular and extracapsular ribbon gut method of renal repair[6] has won wide favor. If a defect is present or the bleeding brisk, a slice of retroperitoneal fat is placed in the wound. As in all ways of renal repair, only enough tension is applied to the suture to achieve gentle approximation of the wound edges.

In recent years, Gelfoam® with thrombin, fibrin foam and Oxycel have been used in place of fat or muscle. MacDonald and Mathews[7] were very favorably impressed with the use of Gelfoam and fibrin foam in renal operations. They used only capsular sutures, placing the hemostatic substances in the wound, and encountered no secondary hemorrhage or fistulae. The Gelfoam remains longer than fibrin foam and forms a scaffold for granulation. Hinman and Babcock[4] are not as favorably impressed. Experimentally, they showed that if Gelfoam and Oxycel are used in the presence of gross infection without drainage, a definite foreign body reaction and abscess formation result.

The judicious use of modern antibiotics, after identification of the infecting bacteria, is the greatest preoperative and postoperative aid to hemostasis.

CONCLUSION

To achieve satisfactory results from operations on the renal parenchyma, the chief objective is to conserve the normal uninvolved secreting tissue.

Attention must be given to the architecture of the vascular supply, with due respect for the nature of the renal arteries, which are true end-arteries.

Proper methods in the control of the pedicle, heminephrectomy, and renal biopsy may permit preservation of renal tissue and leave the patient with two good kidneys. Resection of deep-seated parenchymal lesions, such as calyceal diverticula, is now an established and noteworthy procedure. It is now permissible to use biopsy in cases of suspected renal neoplasm.

Postoperative nephrostomy is not always necessary in the presence of infection if drainage is good and effective antibiotics are used. Infection is the most frequent cause of postoperative hemorrhage.

There is no one satisfactory method of hemostasis. Hemostasis is best served by attending to the principles of vascular anatomy, postoperative drainage, control of infection, and gentle accurate approximation of tissues. Mattress sutures should always be placed in the plane of the vessels so that important distal arterial branches are not obstructed. Retroperitoneal fat is a more physiologic material for filling defects and controlling bleeding from raw surfaces.

655 Sutter Street.

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Adenotonsillectomy

Indications and Application of Surgical Techniques

Emery Leivers, M.D., *Woodland*

SUMMARY

As a result of audiometric surveys in public schools, many children are being referred to physicians for further examination and definitive treatment. Therefore, the indications for adenotonsillectomy are reviewed.

It is believed that the operation should not be done in infants with congenital deafness until full study of the problem has been completed, and that it should not be done routinely in children in whom there is no positive indication for it. When the operation is done, as much normal mucosa as possible should be saved. Closing the superior aspect of the incision with chromic suture is recommended as a means of avoiding a vertical band of scar tissue which may divide the tonsillar fossa into two parts.

IN California it is becoming increasingly apparent that otolaryngologists will have to work closer with the public school systems. In audiometric studies being done by school nurses it has been found that a large number of children have conditions which necessitate further examination and referral for definitive care. Since one phase of this care includes the adenotonsillectomy problem, it might be well to review again the indications for this operation and to discuss certain surgical techniques in the procedure.

Shambaugh[5] and Fowler[2] have written excellent articles on this topic and leave little to be added.

Indications for adenotonsillectomy are:

1. Deafness, conduction type, caused by:
   a. Eustachian tube obstruction
   b. Serous otitis media
   c. Purulent otitis media, acute, recurrent or chronic
2. Nasopharyngeal obstruction from adenoidal mass with associated mouth breathing, purulent rhinitis and purulent sinusitis
3. Oropharyngeal obstruction from extreme hypertrophy of tonsils
4. Recurrent tonsillitis or peritonsillar infection
5. Recurrent cervical adenitis
6. Diphtheria carriers

It is the author's impression, after examining a large selected group of children with deafness, that eustachian tube obstruction and serous otitis media account for a large percentage of the new cases of deafness in school children. Fortunately, in most such cases surgical care alone is effective. For a few patients radiation therapy at a later date is necessary. The beneficial results obtained with these groups have stimulated school teachers and nurses to ferret out all children with possible deafness.

The therapeutic value of carefully done adenotonsillectomy in cases of purulent otitis media is well established.

Nasopharyngeal obstruction from adenoidal mass with associated mouth breathing is common. The relief after operation is gratifying. In a good environment, a child with concurrent purulent rhinitis or sinusitis is usually promptly relieved of these conditions also. Nasal obstruction is often a manifestation of an allergic state. However, this is a separate problem and must be dealt with before operation is considered. Clein[1] stated that undiagnosed allergic disease is a factor in regrowth of lymphoid tissue in the tonsillar fauces and adenoid area.

Oropharyngeal obstruction from extreme hypertrophy of the faucial tonsils is not so common. Difficulty in swallowing solid food and altered voice are often the principal complaints.

Recurrent tonsillitis or peritonsillar infection are considered a true indication for operation.

Recurrent cervical adenitis is an indication for surgical care providing the child has been studied carefully. Search should be made for a source of infection other than the tonsils. Blood dyscrasias, lymphoblastomata and congenital cysts should be considered.

Finally, even though diphtheria is becoming an infrequent disease, occasional carriers are found who do not respond to medical treatment.

Operation should be delayed in infants with suspected complete congenital deafness; and it should not be done routinely, in the absence of positive indications.

It is the author's opinion that infants with suspected complete congenital deafness should not be subjected immediately to operation on the throat. It seems more rational to study the child completely to determine the proper regimen. At some later date, the operation can be done if it is indicated.

Often a child is taken by a parent to a physician for adenotonsillectomy in preparation for school; but if the history, results of examination and audiogram give no true indications for it, the operation should not be done. The child should be examined at annual intervals, and if more positive indications develop, the operation then can be carried out.

Presented before the Section on Eye, Ear, Nose and Throat at the 80th Annual Session of the California Medical Association, Los Angeles, May 13 to 16, 1951.

It is obvious that many possible indications for operation have been omitted from the above list. It is probable that every surgeon has achieved beneficial results in a variety of other diseases. However, it has been the author's experience that the results of operations done on the basis of less well defined indications are so varied that the conditions for which surgical treatment was carried out cannot be listed as true indications.

Since there are so many references in the literature to the rheumatic fever problem and its relation to tonsillectomy, it cannot be passed without comment. Higbee[3] summarized this very well: "Once rheumatic fever is established, tonsillectomy should be performed only for reasons of general health and increased resistance of the patient." Higbee mentioned the danger of converting a subclinical form of the disease into a very active virulent form. Nelson[4] studied a group of rheumatic fever cases at the U. S. Naval Hospital at Dublin, Ga. He found no adverse effect from tonsillectomy in a highly controlled group of cases but was unwilling to recommend routine tonsillectomy for patients convalescent from rheumatic fever. At Woodland Clinic it is deemed justifiable to carry out the operation in

Figure 1.—Diagrammatic drawing of oropharynx.

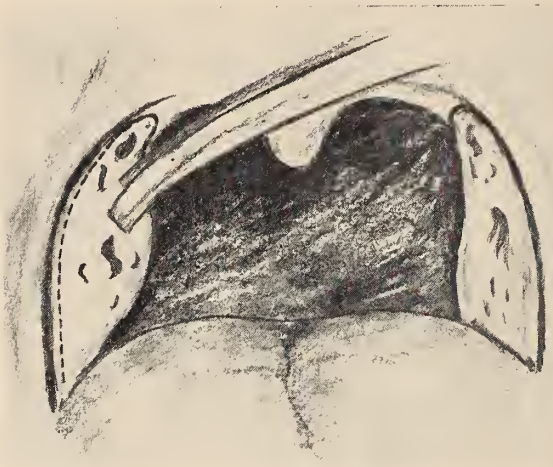

Figure 2.—Dotted line indicates line of incision.

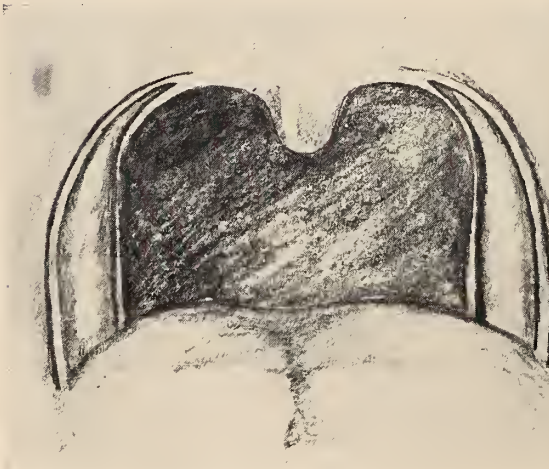

Figure 3.—Diagrammatic drawing showing a margin of normal mucosa along the pillar edges.

Figure 4.—Sutures in place in the right fossa.

Figure 5.—Diagrammatic drawing showing the difference in healing and beginning formation of the vertical scar.

cases in which the patient has recurrent episodes of tonsillitis with associated exacerbations of rheumatic fever.

PROCEDURE

Each surgeon has his own modified procedure, and no attempt is made here to alter these methods. In order to attain more rapid healing and to have minimal scarring, it is urged that the maximum of normal mucosa be left along the anterior and posterior pillars and also in the supratonsillar fossa. Whether this is done with scissors or blade seems to make little difference. However, the few millimeters of normal mucosa left is of definite advantage.

In order to gain a little in healing and also further prevent scarring, the author suggests using a 4-0 chromic atraumatic suture in the very superior aspect of the incision.* Two simple sutures are placed just through the mucosa of the anterior and posterior pillar. The closure is attained not by suturing through the pillars themselves but by utilizing the normal mucosa which was saved. This closes the superior portion of the incision for about 5 to 8 millimeters. In a number of cases the author sutured one side and left the remaining side as control. On the sutured side the superior aspect of the fossa healed with a smooth mucosa with a minimal scar and an advancing concave edge. This was in contrast to a fine vertical scar on the control side and an advancing inverted V edge, which in the author's opinion produces the central vertical band of the scar tissue which often divides the tonsillar fossa into two parts (see illustrations).

Woodland Clinic.

* The author uses a Davis and Geck ureteral atraumatic needle and 4-0 chromic suture No. 1691.

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Discussion by LELAND HUNNICUTT, M.D., *Pasadena*

There is an old Chinese proverb which says that after an apple becomes ripe the next thing that happens is that it rots. We might apply this thought to some of our surgical procedures. If we do not improve certain techniques, stagnation may occur. Dr. Leivers has described what he believes is an improvement on a standard technique. We should welcome any new suggestion and evaluate it.

Anything that helps prevent scarring and promotes healing is all for the good. I have used the suture which he recommends in about 50 cases, doing it on only one side for a comparison study. In most cases the results were as described by Dr. Leivers. Last winter in a postgraduate course in Los Angeles, Dr. Widford Belknap of Portland, Ore., described his method of completely obliterating the tonsil fossa. He reported that when this method was used postoperative hemorrhage rarely occurred and that healing was rapid.

Dr. Leivers' indications for tonsillectomy include the major ones most of us agree with. We must be on the alert for other conditions causing infected tonsils and adenoid tissue. Among them are sinusitis, allergic disease or secondary infection from poor drainage in the nose and sinuses, or allergic disease alone, resulting in apparent hypertrophy of lymphoid tissue, in infected teeth, infected gums, and pyorrhea.

Adenoid tissue in relation to deafness is now very much in the foreground because of the statewide examination of school children. We must cooperate in this fine work and be alert to spot those children we can help.

Radiation Therapy in Breast Cancer

A Preliminary Report on the Application of a Technique of the McWhirter Type

ELMER A. LODMELL, Colonel, M.C., and PETER R. BRADY, Captain, M.C., U. S. Army, *San Francisco*

SUMMARY

A modification of the radiation technique advocated by McWhirter was used in the treatment of 12 patients with carcinoma of the breast. On the basis of observations it is believed that the method has definite merit. It is believed that for patients who have had radical mastectomy, radiotherapy should be protracted over a period of more than three weeks.

IN 1935 the surgical staff at the Royal Infirmary in Edinburgh began a careful evaluation of the methods of treatment of carcinoma of the breast, and in 1941 agreed upon a course of action that has since been employed.[1] Because the name of Professor Robert McWhirter has been prominent in world literature concerning the treatment of carcinoma of the breast, the method employed at the Royal Infirmary is commonly known as the McWhirter technique.

The decision to employ simple mastectomy and radiotherapy was based upon observations concerning the effectiveness of many different methods of treatment, and the following were important in influencing the staff of the Royal Infirmary to effect the change:

"1. When the disease is confined to the breast, surgery gives good results. Surgery is thus an effective method of treating the disease in the breast, and it was decided that surgical removal should be continued.

"2. While at first sight surgery might appear to be the most satisfactory method of treating the axilla, a more careful examination will show that its value is, in fact, very limited. It is true that the results are excellent when the axillary glands are not involved, but if there are no malignant cells in the axilla, it would appear unnecessary to dissect it, for the removal of normal lymph nodes cannot influence the results. On the other hand, when the axilla is secondarily involved, there is universal agreement that radical mastectomy often fails to save the life of the patient. Since, therefore, surgical removal of the lymph nodes is unnecessary when the axilla is not involved and often fails when the axilla is involved, it was decided to treat the axilla by radiotherapy to see if better results could be obtained.

"3. In many forms of cancer radiotherapy has now become the treatment of choice, and in breast carcinoma it has been shown that postoperative recurrences can be effectively treated by this means. Immediate postoperative radiotherapy will greatly reduce the number of local recurrences. From these observations it must be concluded that radiotherapy can destroy breast cancer cells and that radiotherapy is at least an alternative method of treating the axilla."[2]

The technique of treatment as described by McWhirter[1] for operable cases, that is, clinical Stages I and II, is briefly as follows:

1. Simple mastectomy and removal of readily accessible lymph nodes lying outside the axillary fascia, followed by:

2. One full course of roentgen therapy begun as soon as possible after wound healing, preferably within two weeks.

3. Radiation to four fields daily. The axilla is treated through an anterior and a posterior opposed field. The chest wall is treated through two opposed tangential fields (Figure 1).

4. A minimum tumor dose of 3,750 r is given in a period of three weeks.

5. Use of roentgen ray equipment capable of producing x-rays of the quality of 3.7 mm. Cu HVL.

The results of treatment of breast cancer by that method at the Royal Infirmary since 1941 indicate survival of 43.7 per cent of *all* patients with carcinoma of the breast referred for treatment.

Since January 1, 1950, the method advocated by McWhirter has been employed (with some modification) in the treatment of 12 patients with carcinoma of the breast at Letterman Army Hospital in San Francisco. The youngest patient in this group was 30 years of age and the oldest was 66 years. The average age was 49. They were grouped, in accord with Portmann's classification of clinical staging, as follows: Stage I, four cases; Stage II, four cases: Stage III, two cases; Stage IV, two cases. Simple mastectomy was carried out in six cases (three Stage I, one Stage II, one Stage III, one Stage IV). Radical mastectomy was done in four cases (one Stage I, three Stage II). Biopsy was done in two cases classified as inoperable (one Stage III, one Stage IV). Both of the patients with Stage IV

From The Radiological Service, Letterman Army Hospital, San Francisco.

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carcinoma died, one from extensive visceral and skeletal metastases and the other from pulmonary metastases complicated by bronchopneumonia and suppurative bronchiectasis.

The purpose of this presentation is to enumerate the technical difficulties experienced in administering the treatment; stress the complications which may arise when the technique is applied to patients who have had radical mastectomy; point out that the skin reaction is rather severe in most cases, particularly the axilla; and point out that the tumor dose recommended by McWhirter can be given with a beam of less than 3.7 mm. Cu HVL.

Technical Problems: When treatment is begun soon after radical mastectomy, patients are loath to move and it is difficult to place them in proper position for treatment of all areas. This applies particularly to the treatment of the anterolateral tangential portal which requires abduction of the arm. The time required to treat such patients may be as much as one hour and fifteen minutes daily.

Complications: Moderate to severe edema of the arm developed in four patients who had radical mastectomy in from four to eight weeks after completion of radiation therapy. This subsided after about six weeks in three instances, and persists in

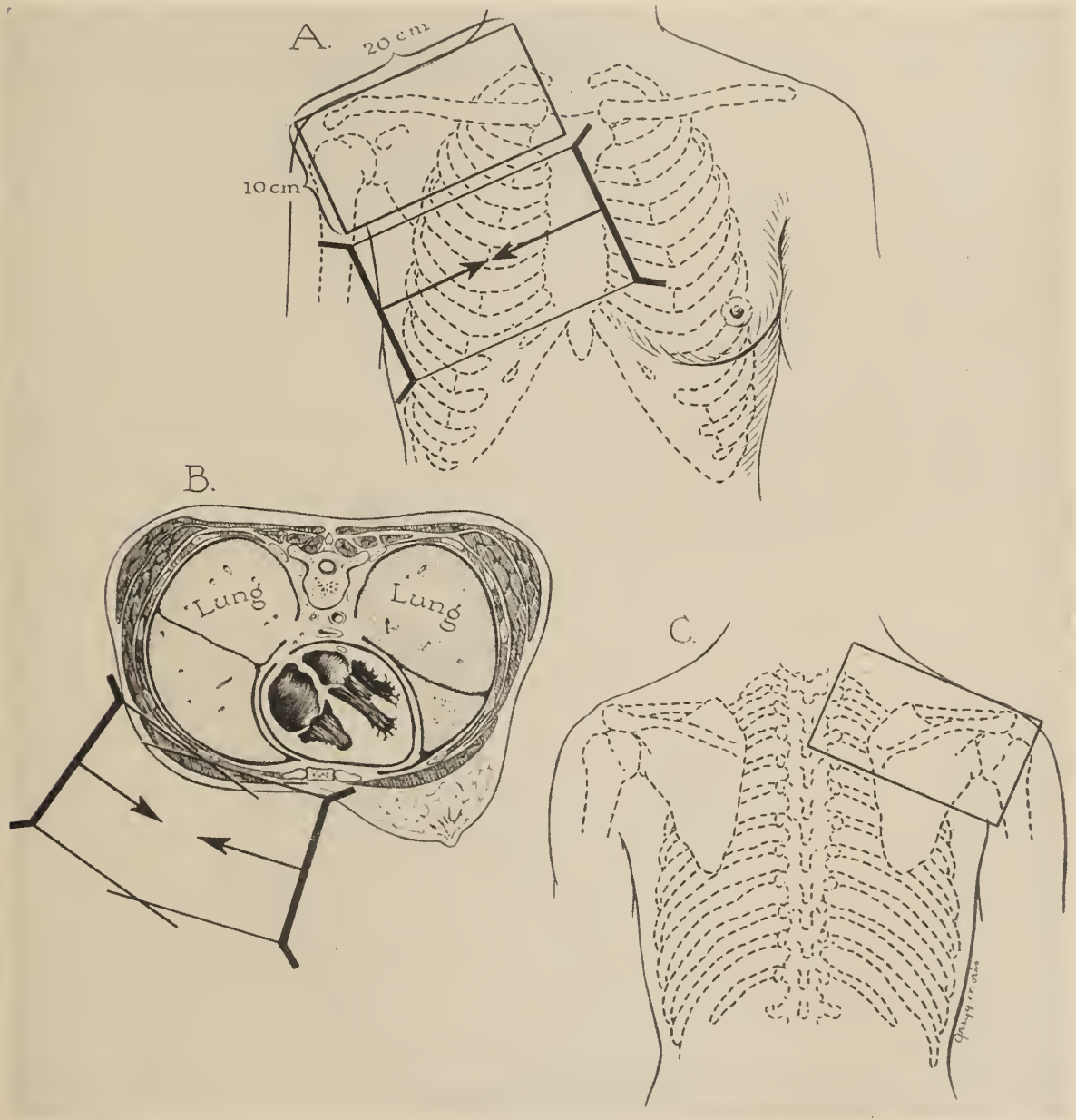

Figure 1.—Diagram of treatment portals used. Bolus bags containing rice were used on the tangential fields to the chest wall.

slight degree after 20 weeks in one. It is quite possible that similar edema would have developed in these cases after operation alone. In one case a draining sinus persisted three months after completion of treatment. This may have been due to necrosis of the remnant of the pectoralis major muscle at its insertion on the humerus following division and ligation (see Table 1).

Skin Reactions: In most cases a rather pronounced moist epidermitis developed and reached its height in ten days to three weeks after completion of radiation therapy. In all cases this was most severe in the axilla. The skin reaction on the chest wall was more severe in patients who had had radical mastectomy than in those who had had simple mastectomy (Figures 2 and 3). McWhirter does not

TABLE 1.—*The Therapy and Immediate Results of Therapy*

Case	Radiotherapy Instituted (postoperative days)	Tumor Dose Axilla	Days	Tumor Dose Chest Wall	Days	Height of Reaction (weeks)	Severity	Comments
					SIMPLE MASTECTOMY			
1	11th	3,848 r	15	2,640 r	15	3-4	Moderate	None
2	15th	3,724 r	14	3,452 r	14	4	Mild to moderate	None
3	8th	3,892 r	16	2,448 r	14	3	Moderate	None
4	10th	3,810 r	17	2,652 r	15	3	Severe	Patient was somewhat obese and had severe skin reaction.
5	8th	2,600 r	12	2,040 r	12	....	.....	Treatment discontinued because of poor general condition. Patient died of visceral and skeletal metastases three weeks later.
12	5th	3,888 r	21	3,456 r	21	2	Moderate	Patient received a calculated dose to the uterus of 1,736 r in 16 days.
					RADICAL MASTECTOMY			
6	15th	3,840 r	15	2,448 r	15	3	Severe	Pitting edema of arm, forearm and hand developed one month after therapy concluded. Edema subsided somewhat but persisted in arm.
7	15th	4,020 r	18	2,856 r	17	2-3	Very severe	Patient had minimal edema of arm. Skin anterior to apex of axilla ulcerated about six weeks after therapy and drained serous material for one week, then became secondarily infected and had purulent drainage for several weeks.
8	11th	3,952 r	15	2,784 r	14	2-3	Moderate	Following treatment severe edema of the arm developed. Five weeks after therapy was completed thrombophlebitis of the cephalic vein developed, secondary to unrelated acute cellulitis of one finger. Minimal edema remains in the arm.
9	11th	3,796 r	15	2,448 r	15	2-3	Moderate	One small area of incision had not healed two and one-half months after therapy completed.
					BIOPSY ONLY			
10	.....	3,780 r	14	4,480 r	52	2	Severe	Ulcer did not granulate in. Simple mastectomy performed with skin graft. Following this multiple metastases to lung appeared.
11	.....	3,808 r	17	2,856 r	17	2	Severe	Patient died four and one-half months after completion of therapy from pulmonary metastases complicated by bronchopneumonia and suppurative bronchiectasis.

Figure 2.—Changes in the skin 14 days after completion of treatment.

Figure 3.—Changes in the skin 13 weeks after completion of treatment.

recommend heavy radiation after radical operation. No general reactions were noted.

Technical Factors: All treatment was given with a "Maximar 220" therapy machine. The factors were 220 KVP, 15 M.A., ½ mm. Cu and 1 mm. Al added filtration, 50 cm. distance, HVL 1.4 mm. Cu.

Conclusions: From this preliminary study of 12 cases, it is felt that the method of radiation therapy of breast cancer employed at the Royal Infirmary in Edinburgh has definite merit. It is felt that if radical mastectomy is done the radiotherapy should be modified by protraction beyond three weeks in order to avoid severe reactions in tissues already devitalized by the surgical treatment.

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Discussion by L. Henry Garland, M.D., *San Francisco*

The problem of breast cancer is the problem of cancer *outside* the breast. When breast cancer is confined to the breast, simple mastectomy will cure—although radical operation is commonly done. Competent surgeons report about 75 per cent relative five-year arrests in clinical Stage I breast cancer. The reason for the 25 per cent failures is presumably that the clinical diagnosis of cancer confined to the breast was erroneous in at least that percentage of cases, and that a majority of women with cancer spread beyond the breast are not cured. When cancer has so spread, the best surgical results (by radical operation) range from 20 per cent to 40 per cent relative five-year arrests; in other words, there are 60 per cent to 80 per cent failures.

The care of women with breast cancer involves the treatment of patients in *all stages*, operable and inoperable. Haagensen reported *absolute* five-year arrests in about 33 per cent of cases, Taylor 32 per cent and other workers about 30 per cent. In most of these cases the lesions were "operable," that is, were early or moderately advanced cancers; and in most of them radical operation was done.

On the other hand, McWhirter reported 35 per cent *absolute* five-year arrest in unselected material by a combination of simple mastectomy and postoperative irradiation. In his hands the over-all results, with the combination of simple operation plus postoperative irradiation, were as good as, if not better than, those achieved by others with radical operation with or without radiotherapy. They were distinctly better than were his own results with radical operation. These were reported in 1948 as follows: with radical operation and postoperative roentgen therapy (790 cases) 32.4 per cent five-year survival; with simple operation and postoperative roentgen therapy (459 cases) 42.9 per cent five-year survival. This represents an improvement in *relative* results of almost one-third.

Colonel Lodmell has started an investigation which, we hope, will be one of many such studies carried out in order to confirm or refute the results of the Scottish investigator. The colonel has emphasized that the technique he uses is a modification of McWhirter's, but I am sure that it does involve the basic principles set forth by that worker.

It was my privilege to visit McWhirter's department in June 1950. All patients with breast cancer, except the extremely obese and those in a terminal stage, were treated by simple mastectomy and postoperative irradiation. Radiation treatment usually started on the 12th postoperative day; 15 treatment days were planned, with four fields to be treated each day. The fields were marked with ink on the patient's skin and the marks renewed semi-weekly. Suitable cones were aimed at each of the fields, and the space between the cones and the patient filled with bolus bags.

The anterior thoracic wall was treated by tangential fields, each approximately 15x10 cm.; the mesial field was angled about 56 degrees and the lateral 236 degrees. A lead strip, about 8x2 cm., was laid along the upper edge of each of these tangential fields to prevent overlap with supraclavicular fields. The supraclavicular fields included the axilla, and

were irradiated anteriorly and posteriorly, with the patient's arm abducted. The anterior field averaged 25x12.5 cm., and the posterior about 20x12 cm.

The daily dose to each of the tangential fields was 275 r skin, and to the supraclavicular fields 260 r skin. Most of the units were operated at 250 kv.; the filter for the tangential fields was 0.4 mm. tin and for the supraclavicular fields 1.5 mm. tin. Attempt was made to deliver a minimum tumor dose of 3,750 r in three weeks (15 treatment days), the maximum tissue dose being about 4,500 r. The treatment was meticulously given to each patient, and a *complete follow-up* maintained. McWhirter now treats about 300 new patients each year.

The following summarizes the apparent advantages of simple mastectomy plus full postoperative irradiation over radical mastectomy:

1. Decreased chance of cancer dissemination by avoidance of the prolonged handling of tissues necessary in axillary dissection.

2. Decreased operative morbidity—a surgical procedure of less than one hour, as opposed to the five-hour procedure of Haagensen.

3. Almost complete absence of postoperative edema (as opposed to about 10 per cent incidence after radical operation).

4. Ability of patient to resume occupation or useful work earlier than after the radical procedure.

5. Radiation procedure simpler and less time-consuming than the Swedish preoperative and postoperative technique (the only other radiotherapy technique with results statistically comparable to McWhirter's).

6. Improvement in the five-year absolute survival rate.

It is essential that major postoperative irradiation of the McWhirter type be given with the *greatest care*, and that all investigators report their results in full so that the advantages and disadvantages of the method can be assayed after the lapse of five and ten years. The immediate care and handling of these patients has been well described by the speaker, to whom we would direct just one question: Why did he decide to keep the patient's arm adducted in some of the cases?

(Colonel Lodmell replied that it was thought that, by this departure from McWhirter's technique, a better depth dose might be delivered to the axilla. Another reason was that the position caused less discomfort to the patient so soon after operation.)

The Pros and Cons of Routine Circumcision

Deron Hovsepian, M.D., *Pasadena*

SUMMARY

The origin of the practice of circumcision is an ancient one having a ritual significance in most cases, but the operation is done primarily for hygienic purposes amongst English-speaking people.

Critical evaluation of the indication for circumcision suggests that the hygienic principles are probably overrated. If it were understood that the anatomy of the prepuce and glans has a morphological development which in most cases removes the possibility of phimosis after the third year, less emphasis would be placed on the necessity for the operation.

On the other hand, the feeling exists that boys who will require circumcision because of phimosis, balanitis, etc., should not be subjected to the operation at the age when psychological trauma can result. Convention and conformity demand the continuation of the procedure in many areas. The decision to circumcise remains a matter of individual preference as prescribed in the doctor-patient relationship.

BECAUSE of the tendency to circumcise newborn male infants as a routine procedure, it seems advisable to contemplate the various indications and contraindications for the operation and to attempt a logical appraisal of the need for it. Extreme voices in opposition speak of circumcision as a "process of mutilation of the penis," while complacent proponents say, "Let's get it over with." Is there a correct answer?

Proper hygiene seems to be the prominent incentive for the rather general prescription of circumcision in the western nations and among English-speaking people. However, it might be well to review historical data on the origin of circumcision.

Ritualistic circumcision extends back to the stone age, from all that is known.[5, 6] In the primitives, circumcision was done at puberty, a practice still followed by the aborigines in some parts of the world. Nunberg,[7] Daly,[3] and others indicated that circumcision represented symbolic castration, and that the underlying motives were the repression of incest and reinforcement of the masculinity of the initiated boy. It seems quite improbable that hygiene is a motive among primitive peoples, since numerous tribes who have not the foggiest idea of cleanliness, hygiene, or prophylaxis practice the operation. Its use as a tribal mark[3] is credible, since circumcision amongst the Egyptians, Hebrews, Mohammedans, and many primitive peoples heightened the consciousness of tribal pride and unity, as is evidenced by the contempt of circumcised peoples for the uncircumcised. That circumcision originated as a test of endurance is untenable, for stolidity is a requisite in many other primitive rites. Those who advance the theory that the operation originated as a preparation for sexual life, support it with the postulation that the widespread practice of circumcision at puberty was an attempt to discourage masturbation, or to promote fertility. This again is refuted in the knowledge that primitive peoples know nothing of the cause of pregnancy; for them the condition is merely a visitation of a departed spirit.

A great religious significance[5, 11] was placed upon circumcision by the ancient Hebrews when the covenant between Jehovah and Abraham was solemnized by the cutting of the foreskin. After the settlement of the Israelites in Palestine, this pubertal rite was transferred to the eighth day after birth. It has been debated whether the Hebrews actually had in mind prophylactic measures as well as a religious rite.

From a profound and ancient background, circumcision has evolved into an everyday and commonplace operation, with a new and possibly superficial significance placed upon it. What are the material benefits derived from routine circumcision of the newborn male infant?

McMann[6] in this country and Gairdner[4] in England attempted to focus attention upon the need for a better understanding of the anatomy and development of the penis and prepuce of the infant and child. By this means, some of the erroneous ideas which are prevalent among medical and lay people may be corrected, and a new light placed on the question of circumcision as a routine procedure.

The prepuce is still in the course of development at birth, and in only one case in 20 is it fully retractable at this time. Accordingly, rather than ascribe this to adhesions, it is proper to identify the condition as an incomplete separation of the prepuce and glans.[4] In Gairdner's survey of about 300 boys ranging up to three years of age, it was noted that the prepuce was non-retractable in 80 per cent at six months and 50 per cent at one year. At two years of age, only 20 per cent of the subjects had a non-retractable prepuce; and at three years, only 10 per cent. Although many physicians use the term phimosis in describing non-retractability, implying pathological constriction of the prepuce, actually the condition is caused by the persistence of strands of tissue between the prepuce and the glans. In most instances the foreskin, although tight, may be retracted after a probe has been passed gently around the space between the prepuce and the glans to disengage the strands. As probing may cause some bleeding and subsequent discomfort, the procedure is not recommended as a routine measure in the very

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young. Better not to probe or retract until normal development makes for the optimum time.

How long ought one wait? Because inspissated smegma is certain to become an irritative accumulation, after a child is about three years of age steps should be taken to make the foreskin retractable and so that glans and prepuce can be kept clean. This usually can be accomplished by careful probing and retraction; but if the procedure is unsuccessful, eventual circumcision is to be recommended.[4]

Too often, mothers are given the misguided instruction to retract and stretch the infant's prepuce forcibly and regularly. The result may be a traumatized and irritable baby and a frustrated, frightened mother. Fissures at the orifice of the prepuce may become infected or bleed, causing the baby to cry with micturition; or overzealous retraction may cause paraphimosis, necessitating a harrowing remedial treatment. All this because of the ignorance of the anatomy of the prepuce in infancy. Too often when such complications develop, prompt circumcision is recommended, the parents are blamed for not heeding previous advice and they are remorseful that they have not spared themselves and their child this misery.

Other pathological conditions of the prepuce are cited as positive indications for circumcision in order to cure existing disease or to obviate future complications. Inflammation receives considerable attention because it is common. True, cellulitis of the prepuce can occur, but it can be effectively treated with antibiotics or with chemotherapy. Inflammation associated with ammonia dermatitis of the diaper area, a rather common occurrence, may cause thickening and edema of the foreskin that is often mislabeled "redundant prepuce," although simply rinsing the diapers with a mild non-toxic antiseptic such as Diaparene® usually results in effective relief of the condition.[4] A measure of the protective function of the prepuce is given by the fact that ulcers of the meatus rarely occur in persons who are not circumcised.

Enuresis, habit spasms, masturbation, and even convulsions have been attributed to phimosis—and upon this have been based arguments for circumcision. In intelligent scrutiny of the situation, however, mere non-retractability of the prepuce rarely can be judged the cause for such phenomena.

Circumcision entails risks of hemorrhage and sepsis—certainly not inconsequential considerations. If a general anesthetic is employed, the possibility that the patient may die in anesthesia must be considered. In England about 16 children under five years of age die each year of causes attributable to those hazards of circumcision.[4]

Far too frequently circumcision is done with little regard for true anatomic relations—too much or too little of the prepuce may be removed, or it may be ragged or unsightly. Often, repair for cosmetic reasons alone is indicated, reflecting little credit upon the medical profession. Circumcision is often relegated to an intern, or to a surgeon who has no particular skill in the technique, without adequate instruction or supervision, whereas it should merit the attentions of a qualified surgeon. A standardized technique cognizant of hemorrhage, edema, sepsis, and imperfect result should be emphasized.[1, 2, 9]

The casual way in which consent for circumcision is being given by parents also must be mentioned. On entering the birth room, the harassed mother is offered a paper to sign giving consent for circumcision, and she promptly signs between labor pains. The anxious father is halted while pacing up and down and is confronted with the same paper. It may be surmised that the vast majority of parents really have not had the true implications of circumcision discussed with them and that they give their assent because "it must be the thing to do or our doctor would have told us about it," or because "the girls in the neighborhood or the club said that it's best." Informal questioning of parents with regard to the reason they had for consenting to circumcision of their boy has brought out such answers as, "It's the thing to do, isn't it?" or "We believe in it." In light of such replies, it may be wondered if the profession has diligently given an unprejudiced and qualified evaluation of this question to prospective parents.

Opponents of routine circumcision say that the prepuce of the infant should be left in its natural state. In most instances it will become retractable when complete separation occurs, usually when the infant is between the ages of one and three years. As soon as it is retractable, the parts may be washed with soap and water during the regular bath period. Older children should be taught to keep the foreskin clean just as they are taught to wash their ears.

On the other hand, there is much to be said for routine circumcision. The very fact that there is so much uncertainty and fear in the minds of mothers concerning the cleanliness of the prepuce makes it a very acceptable procedure to many experienced and qualified pediatricians. How else should a mother be expected to react to anything pertaining to cleanliness and germs, after having been conditioned so rigidly in such health matters as formula making, the wearing of masks, the use of soap and water, and necessity for immunizations? Most physicians probably have encountered the parent, properly educated or not, who after a few sad experiences with even such readily reversible conditions as balanitis and posthitis, has regretted that circumcision was not done early.

Army medical officers, particularly of field units, can readily recall the discomfort of many of the men who were not circumcised, after extensive maneuvers or combat periods. Ordinarily fastidious soldiers, deprived of elementary requirements for cleanliness and hygiene under field conditions, had all degrees of balanitis. Consent to circumcision was usually obtained with very little difficulty, as urologists in the armed services can attest.

Cancer of the penis is absolutely prevented by circumcision in infancy. This disease causes about 250 deaths annually in this country, yet not a single case has ever been recorded in a Jew ritually circumcised in infancy.[10] In a study of the incidence of

penile cancer in India,[10] it was noted that the disease was almost non-existent in Mohammedans, who circumcise their males, but that it accounted for 15 per cent of all cancers in man in that country and occurred almost exclusively in Hindus, who do not circumcise their male children. Although the disease is rare in Mohammedans, that it occurs at all is significant in that their circumcision ritual is carried out when the child is between the ages of four and twelve years. The implication is that irritations produced early in life by smegma contained beneath a non-retractable prepuce predispose to cancer even though these secretions are eventually removed by circumcision.[10]

Brief mention can be made of the postulate that cancer of the cervix may be related to this factor. There is a significantly low incidence of the disease in Jewish women although women of that race are especially vulnerable to cancer. The elimination of a possible cancer-forming substance of the preputial space by circumcision is accordingly suggested.[10]

The community practice of circumcision often makes it mandatory that there be conformity among boys developing and growing in the same culture. This, of course, varies in different parts of the United States as well as elsewhere. Recently a forceful example was given to the author: The two boys of a family refused to participate in a Y.M.C.A. swimming program until they too were circumcised, in order to avoid being conspicuous. This would at first appear to be a superficial argument for routine circumcision, but those who are aware of the many emotional and psychological problems that face children do not dismiss it lightly. The period of genital anxiety and the awareness of sexuality in children is well recognized by pediatricians as an integral part of the emotional development of the child.[8]

An intensification of genital anxiety can be expected in any child who must submit to circumcision in this period of awareness. The pain and discomfort of the operation and of the convalescent period cannot easily be forgotten and can be the source of far-reaching psychoneurotic complications in later life.[7, 8] One compassionate father, who was circumcised at the age of six, emphatically explained to the author his consent for the circumcision of his son at birth. His wish was that his son need never experience the ordeal he had endured. Spock[8] stated that "from the emotional point of view circumcision should be performed either before the age of six months or not until adulthood." Those who favor routine circumcision at birth are cognizant of these factors in accepting the procedure as an advantage to the male child.

Attention is called to the circumcision routine used at the Huntington Memorial Hospital in Pasadena in the last five years. The obstetrician circumcises the infant while still in the birth room during the observation period. The method used is at the discretion of the individual physician, whether by clamp or amputation and suture. This is a physiologic period in respect to prothrombin levels; early operation eliminates the objection of imposing undue unhappiness upon the baby; and it is done under the strictest aseptic technique. By using the facilities of the birth room already set-up, a saving is made to the hospital in nursing hours and equipment. In 1949 and 1950 a total of 1,878 male babies were born alive at the Huntington Hospital. Of these, 1,746 or 92.97 per cent, were circumcised immediately following delivery. An additional 98, or 5.21 per cent, were circumcised prior to discharge from the hospital, immediate operation having been deferred because of prematurity, because delivery was by cesarean section, or because of fetal distress at the time of birth. Minor oozing of the wound occurred in approximately 15 per cent of the cases, primarily on the day of birth, and in all but three cases was promptly controlled by the use of coagulant agents such as Oxycel® and Gelfoam.® In three exceptional cases mentioned, repair was necessary but there was no need for transfusion. Neither infection of the wound nor sepsis was noted in any case. Two facts stand out: First, the infant is under close and skilled observation in the nursery for five days, and, second, it leaves with its mother with a healed wound.

An impartial scrutiny of the pros and cons of routine circumcision discloses that there is no incontrovertible medical reason for circumcision, except for the prevention of penile cancer, a rare disease. There exists a need for better orientation to the problem by both medical and lay people — a question of education. Convention and conformity demand the continuation of the procedure in many areas. The decision to circumcise remains a matter of individual preference as prescribed in the physician-patient relationship. The decision should be made before the birth of the child, and if circumcision is decided upon, it should be done early, under optimum conditions, rather than expose the male child to disagreeable and unnecessary psychological trauma in childhood or adolescence.

960 East Green Street.

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Colles' Fracture

A Method of Maintaining Reduction

Lewis Cozen, M.D., *Los Angeles*

SUMMARY

A major difficulty in the treatment of Colles' fracture is maintenance of reduction. Wedging of the cast, a procedure used in dealing with other orthopedic conditions, was adapted to the treatment of Colles' fracture and was employed in 23 cases. In most of them the method was effective in preventing displacement.

A SATISFACTORY result of treatment of Colles' fracture depends on three factors: (1) There must be adequate reduction of the fracture; (2) the reduction must be maintained until solid bony union takes place; (3) the joints of the hand and of the shoulder must be freely active during the entire course of treatment.

Of the three requirements, probably the most difficult to achieve is maintenance of reduction until union is solid. It is disconcerting to find, after a perfect initial reduction and application of a seemingly adequate plaster cast, that a deformity of the wrist has, nevertheless, occurred during the period of healing within the cast.

The importance of maintenance of reduction has been recognized in various attempts to circumvent the hazard of displacement: Skeletal traction and skin traction have been incorporated into the application of the plaster. Repeated tightening of the primary anterior and posterior splint has been employed. The purpose of this presentation is to describe a method in which the principle of wedging is applied to the cast for Colles' fracture.

METHOD

The fracture is reduced as soon as possible after the injury by means of manual traction and countertraction and by manual disimpaction of the fracture. A strip of two thicknesses of sheet wadding 1 inch wide is wound around the site of the fracture. A posterior splint of about four layers of wet plaster of paris is placed on the dorsum of the forearm from the metacarpophalangeal joints to the elbow. This splint is fixed to the arm by a flannel bandage, cut at frequent intervals to prevent wrinkling. The wrist is held in the position of correction, ulnar deviation and volar flexion, until the plaster hardens. A roll of plaster of paris is applied to the flannel-covered forearm splint. The forearm is thus well immobilized. The elbow joint then is immobilized by additional plaster of paris bandages. The skin of the upper arm and the elbow may be protected from the plaster by a layer of sheet wadding, since this part of the cast need not fit tightly. After splinting and bandaging is completed, lateral and anteroposterior roentgenograms of the wrist are made. The patient is instructed in the importance of early motion of the fingers and of the shoulder joint, and is warned to report any inordinate swelling or pain.

The foregoing constitutes little deviation from standard procedure. Now the variation: Two or three days after the reduction, the cast is cut circularly (preferably with a Stryker cast cutter) at the level of the fracture. Only a small bridge of plaster is left on the volar and ulnar borders of the wrist. Small wedges of wood (pieces of tongue depressors) are inserted on the radial side of the aperture in the cast. The aperture and wedges are fixed by several layers of adhesive plaster. Anteroposterior and lateral roentgenograms are made of the wrist. If position is satisfactory, the adhesive plaster is covered with a few turns of plaster of paris.

The initial cast is left in place for four or five weeks and a short posterior skin-tight plaster splint is employed for an additional three or four weeks.

RESULTS IN TWENTY-THREE PATIENTS

This method was employed in a consecutive series of 23 patients with displaced Colles' fracture. Undisplaced fractures were not treated by this method. In each there was a comminuted fracture of the distal end of the radius with mild, moderate, or severe displacement. The ulnar styloid process was fractured in all cases. As all the patients were treated in private practice, it was possible to keep them under observation for the appearance of pressure necrosis which it was thought might occur because of the tight cast. Such a complication did not occur.

A specific routine of treatment was not followed. The only common denominators were: First, the long cast extending above the elbow; second, wedging of the primary cast within the first few days after initial treatment; third, a short, skin-tight, posterior splint of plaster extending to the elbow following removal of the primary cast. The two casts were left in place for variable lengths of time. Immobilization was discontinued as soon as bony union was thought to be present as judged by roentgenologic and clinical evidence. Tables 1 and 2 summarize the schedules of treatment and the end results.

There were no untoward complications as a result of the procedure. In two or three cases the casts had to be split because of edema of the fingers. The patients did complain of more pain after the cast was wedged than they had before the wedging. One

patient had a moderate clinically apparent deformity as a result of the fracture but this took place after the plaster cast was removed; the cast had been removed too early. In one case there was some displacement of the fracture after wedging.

Figure 1. Each horizontal pair of photographs represents two views of the result obtained in a single patient.

ANESTHESIA

Five of the patients were given 8.0 mg. or 10.0 mg. of morphine intravenously. Of the 23 patients, 21 were given procaine* intravenously. These patients first were given 1 ounce of whiskey orally to counteract the effect of the procaine to be administered. Twenty cc. of a 0.5 per cent solution of procaine was instilled intravenously, slowly over a period of three minutes. Neither local nor inhalation anesthesia was employed in this series. Local infiltration has the theoretical hazard of increasing tissue edema. General anesthesia would have increased the expense of treatment, although it would be indicated in cases in which analgesia is not produced by the intravenous use of procaine. In this series, however, procaine given intravenously produced satisfactory analgesia in all cases in which it was used. Anesthesia or analgesia was not required for the wedging procedure although it caused moderate pain.

DISCUSSION

The use of wedging or rimming of plaster casts for the correction of recent fracture deformities is not, of course, new. Kite has used wedged casts for many years to correct congenital equinovarus. Previous reports on the use of the wedged cast for the

*For routine use, general anesthesia is safer than anesthesia by procaine given intravenously.

TABLE 1.—*Clinical Data and Schedule of Treatment in 23 Cases of Colles' Fracture*

			Degree Displacement (X-Ray)		Time in Cast		
Case	Age	Months of Follow-Up	Antero-posterior	Lateral	Day Cast Wedged	First Cast Days	Second Cast Days
1	52	10	65	50	2nd	12	13
2	37	3	105	90	2nd	30	21
3	26	5	110	75	3rd	30	21
4	78	17	115	70	1st	14	7
5	62	18	105	85	6th	30	30
6	53	19	115	75	2nd	30	21
7	55	25	110	85	3rd	21	14
8	63	1	105	75	1st	3	9
9	52	25	105	75	1st	21	4
10	40	16	85	50	1st	14	21
11	66	9	105	75	3rd	21	11
12	50	10	105	80	4th	21	12
13	75	32	110	75	3rd	17	7
14	64	16	95	70	3rd	21	5
15	46	24	105	70	2nd	14	11
16	37	20	90	65	1st	21	14
17	51	9	105	65	1st	9	14
18	56	20	95	75	1st	33	14
19	54	12	80	65	1st	30	14
20	62	11	70	65	6th	35	14
21	65	3	90	65	5th	30	10
22	55	9	80	65	3rd	30	21
23	65	7	90	80	6th	30	21

In all but three cases fracture was reduced at office with intravenous administration of procaine. In Cases 6 and 19 reduction was done at hospital with pentothal given intravenously. In Case 22 reduction was done at hospital with procaine given intravenously.

TABLE 2.—*End Results in 23 Cases of Colles' Fracture*

Case	Degree of Anatomic Reduction (Roentgenologic)		Result			
	Antero-posterior	Lateral	Stiffness: Wrist	Stiffness: Hand	Pain	Cosmetic
1	115	85	None	None	None	Excellent
2	110	90	None	None	None	Excellent
3	110	80	None	None	None	Excellent
4	115	90	None	None	None	Excellent
5	110	90	None	None	None	Excellent
6	110	90	None	None	None	Excellent
7	115	90	None	None	Slight, occasionally	Good
8	110	90	None	None	None	Excellent
9	110	90	None	None	None	Excellent
10	110	70	Slight (20% loss of supination) Patient well satisfied	None	Slight, occasionally	Good
11	110	90	None	None	None	Excellent
12	110	90	None	None	None	Excellent
13	105	75	None Patient well satisfied	None	None	Good
14	110	85	None	None	Slight	Excellent
15*	110	80	None	None	Slight, occasionally	Good
16	105	90	None	None	None	Excellent
17	105	75	None Cast removed too soon	None	Slight	Good
18†	115	90	None	None	None	Excellent
19	110	90	None	None	None	Excellent
20	110	75	Slight	None	Slight	Fair
21	110	90	None	Slight	Slight	Excellent
22	110	80	None	None	None	Excellent
23	105	90	None	Slight	Slight	Fair

*Delayed union as cast was removed too soon. Remanipulated eleven weeks after the injury because of increasing deformity. Under pentothal anesthesia fracture was found to be not solidly united. Second manipulation, cast wedged on second day. New cast applied after one month. Short cast off after three weeks.

†Cast and reduction by a physician in another city.

prevention of deformity in Colles' fracture, however, have not been found in the literature.

The wedging procedure has several advantages. It may possibly overcome small amounts of deformity not reduced primarily. It prevents recurrence of the deformity in the cast in most cases. It obviates the necessity for skeletal traction in most fractures of the distal end of the radius. The wedged cast cannot be depended on to prevent deformity in all cases. however. In extremely comminuted and disorganized fractures it probably will continue to be necessary to use skeletal traction by means of a wire through one or more metacarpal bones or to accept deformity of the wrist and perform a reconstructive procedure when some solidification has occurred.

Plaster immobilization must be maintained an adequate length of time. It is easier to relieve stiffness of the wrist than to correct a bony deformity. Active motion of the fingers and of the shoulder must be maintained throughout the period of plaster immobilization.

It should be emphasized that this method of treating Colles' fracture neccssitates experience in nonpadded techniques, frequent roentgenograms and frequent observation of the patient's hand and arm.

Perfect anatomic reduction is not claimed for this method. However, it can be used with benefit in selected cases. And although there may be imperfections in reduction as observed roentgenographically, the method assures an acceptable result from the standpoint of the patient. Both the cosmetic results and the functional results, the latter measured in terms of lack of pain and of stiffness, were satisfactory in the series here reported.

2007 Wilshire Boulevard.

CASE REPORTS

- Eosinophilic Pneumonia (Loeffler's Syndrome)
- Erythema Nodosum
- Waterhouse-Friderickson Syndrome

Eosinophilic Pneumonia (Loeffler's Syndrome)

Report of a Case Treated with ACTH

E. R. Riggall, M.D., *Prairie Grove, Ark.*, and
J. J. McGinnis, M.D., *San Francisco*

PROMPT, excellent and permanent results were obtained by the use of adrenocorticotropic hormone (ACTH) in a case of eosinophilic pneumonia (Loeffler's syndrome).

A 38-year-old white male was admitted to the hospital Nov. 14, 1950, with a history of easy fatigability beginning 18 days prior to admission and of the sudden onset of high fever and diarrhea 11 days prior to admission. A temperature chart was kept (see Chart 1) for the ten days preceding admission. The diarrhea consisted of explosive discharges of watery, colorless fecal material four or five times daily, without cramps or bleeding. It subsided three days after onset. The appetite had been good throughout the illness until two days before admission, when nausea developed, possibly in relation to aureomycin therapy. There was history of two to three chills per day lasting three to four minutes for the preceding ten days, and of fairly frequent morning headaches which were relieved by acetylsalicylic acid. Moderate dyspnea on exertion had been present for several days prior to admission to hospital, and mild, nonproductive cough for one day.

The patient had been treated by a series of physicians and had received penicillin orally and parenterally, aureomycin, and other compounds, the nature of which could not be determined although possibly a sulfa drug was among them. There was no beneficial response to treatment.

The patient gave a history of almost monthly exacerbations of chronic asthma (he was sensitive to house dust) which had begun at the age of three and a half years. Nasal polyps had been removed when the patient was 14 years of age. No further positive relevant information was obtained.

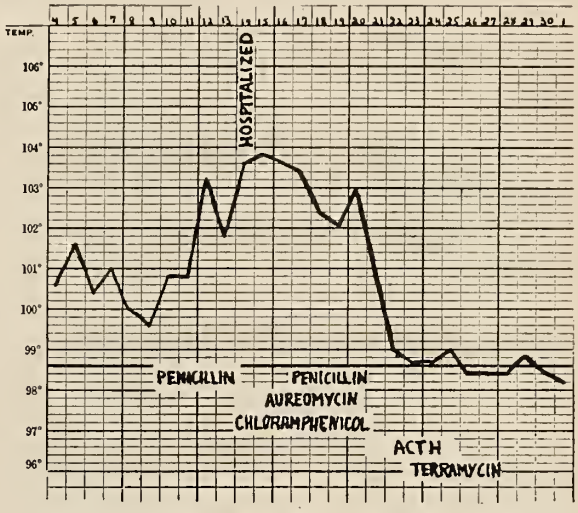
Upon examination the patient was noted to be asthenic. He became dyspneic on minimal exertion, but breathed easily at rest. The skin was hot and dry. The temperature was 100.6° F., the pulse rate 120 per minute, and the respiration rate 20 per minute. A healing area of herpes simplex was noted on the lower lip.

Decreased resonance to percussion, increased tactile fremitus, and decreased vocal fremitus were noted in the posterolateral inferior aspect of the right hemithorax. Subcrepitant inspiratory rales and an expiratory grunt were noted in the same area. Expansion was bilaterally equal.

The blood pressure was 126 mm. of mercury systolic and 72 mm. diastolic. A blowing, grade 1 apical systolic murmur was noted in auscultation of the heart.

From the Southern Pacific General Hospital, San Francisco (McGinnis).

Chart 1.—Precipitous drop in temperature after ACTH in 25 mg. doses every six hours.



Results of urinalysis were within normal limits, and of a serologic test for syphilis negative. The urea nitrogen, sugar and cholesterol contents of the blood were normal. Results of blood cultures and agglutination and complement fixation tests were negative for E. typhi, S. paratyphi A and B, brucella abortus, Proteus OX19, cold agglutinins, Q fever, psittacosis, lymphogranuloma venereum, influenza stains A, A^1, and B, and heterophil antibodies. In examination of five stool specimens obtained on consecutive days, no ova, cysts or parasites were observed. Smears of three specimens of sputum were negative for acid-fast bacilli, and results of culture and of guinea-pig inoculation also were negative. In examination of Gram-stained specimens of sputum taken at the time of admission, the following were noted in decreasing predominance: (1) Gram-negative diplococci, (2) Gram-negative small rods, (3) fusiform bacilli, and (4) Gram-positive cocci in groups. In a Hansel-stained specimen of sputum Nov. 22, 14 per cent of the cells were eosinophils and 86 per cent neutrophils.

Following are the reports on examination of the blood on four occasions:

	Nov. 15	Nov. 20	Nov. 22	Nov. 27
Hemoglobin (gm. per 100 cc.)	12.0	11.0		
Erythrocytes per cu. mm. (millions)	4.4	3.8		
Leukocytes per cu. mm.	23,200	25,700	20,700	15,400
Neutrophils, per cent	75	74	50	55
Lymphocytes, per cent	8	3	25	12
Eosinophils, per cent	12	20	23	19
Monocytes, per cent		2	2	14
Erythrocyte sedimentation rate (Wintrobe, corrected)		31		33

Direct counts of eosinophils per cu. mm. were as follows: Nov. 21, 4,800; Nov. 22, 1,666; Nov. 29, 1,320. Four hours after the injection of 3 minims of 1:1000 epinephrine solution on Nov. 21 the eosinophil count fell only from 4,800 to 3,770.

In x-ray films of the chest made on admission (Figure 1) an infiltrative process in the superior portion of the right lower lobe was noted.

The diagnosis on admission was bronchopneumonia, and antibiotic therapy was started. The patient had two chills on the nights of Nov. 15 and Nov. 17 and the clinical condition remained unchanged despite the addition of other antibiotics in the usual dosage to the regimen (Chart 1). On Nov. 21 a tentative diagnosis of eosinophilic pneumonia was made and ACTH was given intramuscularly as follows: 50 mg. every six hours for four doses, 25 mg. every six hours for two doses, 12.5 mg. every six hours for four doses. Within 24 hours the patient was afebrile and felt quite well. The clinical evidences of pulmonary congestion cleared and were undetectable by Nov. 27 when x-ray films (Figure 2) were reported as indicative of definite improvement. ACTH was discontinued on Nov. 26 and the evidences of the disease remained in abatement. Glycosuria did not occur and no personality changes were noted during or after the use of ACTH. The patient was discharged from the hospital Dec. 4, 1950.

He was reexamined April 16, 1951. In x-ray films of the chest, hilar and basal scarring with moderate emphysematous changes were noted (Figure 3) but there were no residua of the pneumonitis. The hemoglobin content of the blood was 13.5 gm. per 100 cc. Erythrocytes numbered 4,430,000 per cu. mm. and leukocytes 6,100—68 per cent neutrophils (1 stab), 29 per cent lymphocytes, 1 per cent monocytes, 1 per cent eosinophils, and 1 per cent baso-

Figure 1.—X-ray films of chest, posterior-anterior and lateral, November 15, 1950. Consolidation in posterior portion of right lung field involving the superior portion of the lower lobe.

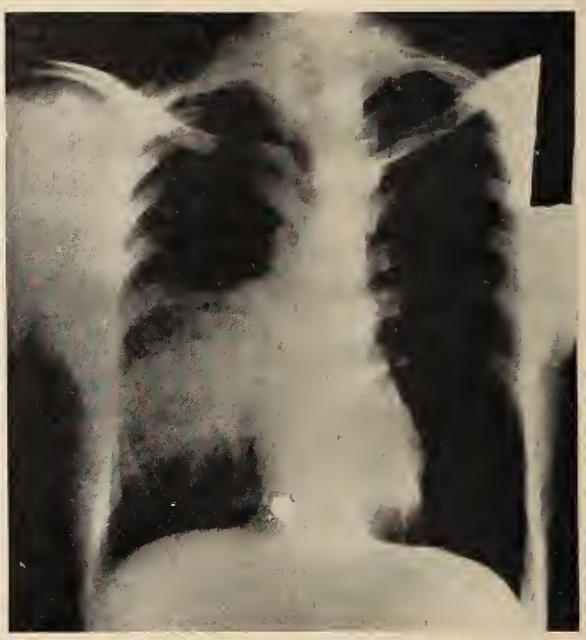


Figure 2.—In x-ray film made November 27, 1950, clearing of the consolidation at the right base was noted.

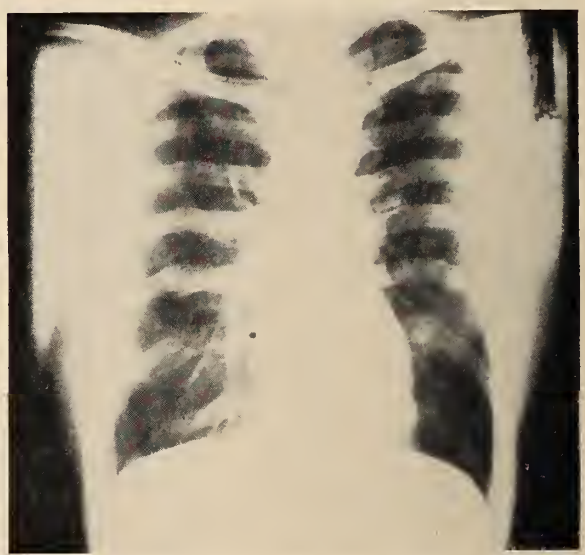


Figure 3.—Roentgenogram made April 16, 1951. The right lung field was completely cleared.

phils. Eosinophils numbered 341 per cu. mm. and the erythrocyte sedimentation rate (Wintrobe, corrected) was 2. The patient stated that his health had been excellent since discharge.

DISCUSSION

The disorder bearing the name Loeffler's syndrome was first described by Loeffler[8] in 1932 as short-lived pulmonary infiltration (as observed in x-ray films of patients with asthma) associated with eosinophilia. In 1936 Loeffler[9] published a report of 51 cases wherein emphasis was again laid on the benign, transient nature of the disease and on the relation to asthma. Since that time, numerous reports of pulmonary infiltration associated with eosinophilia (frequently more prolonged and less benign than in the cases originally reported by Loeffler) have appeared in the literature and many etiologic factors were inculpated, including Entamoeba histolytica,[6] cutaneous helminthiasis[18] (usually due to Ancylostoma braziliense), mites of Tyroglyphus or Tarsonemus,[13, 16] Trichinella spiralis,[12] Ascaris lumbricoides,[10] Clonorchis sinensis,[2] and the ubiquitous Brucella.[3]

It is probable that, whatever the immediate causative agent, the common denominator is the preexistence of asthma, and that the pathogenesis of the disease is severe asthma with atelectasis and superimposed infection producing, to a degree dependent upon the amount of atelectasis and the character of the infection, pneumonic changes and the eosinophilia common to an attack of asthma. Of particular interest in this regard was the report of Jahiel and Jahiel[7] on the experimental production of eosinophilic pneumonia by the injection of antigen into rabbits previously sensitized by inhalants. These investigators noted that the infection depended upon the presence of atelectasis and that the atelectasis, in turn, depended upon the presence of asthma. Hence antibiotic therapy, without first removing, suppressing, or combating the allergic-asthma factors, has little value in severe cases; in mild cases, recovery from the asthma, the atelectasis and the infection will occur spontaneously and in that order.

The nonmalignant nature of the disease has been such that reports on cytological changes have been few. Bayley, Lindberg and Bagenstoss[1] reported a case in which patchy areas of eosinophilic edema were observed. In microscopic examination many eosinophils were noted in edematous fluid; there was evidence of organization with fibrous and giant cells; rather unusual granulomatous lesions were observed; and evidence of necrotizing arteritis and phlebitis was noted. (The latter observation is interesting in connection with a case, recently observed by one of the authors, in which symptoms typical of Loeffler's syndrome were relieved by ACTH therapy but periarteritis nodosa ensued.) Smith[15] reported a case in which the symptoms were those of cosinophilic pneumonia and, at necropsy, changes typical of periarteritis nodosa were observed. Harkavy[5] reported observing pathologic changes like those which occur in periarteritis nodosa, in autopsy of patients with bronchial asthma.

"Tropical eosinophilia,"[15, 17] a disease which is characterized by bouts of asthma, pneumonic infiltration of the lungs, loss of weight and anorexia, and which is associated with pronounced leukocytosis and eosinophilia, has been fairly definitely ascribed to the inhalation of various mites,[13, 16, 17] and it is probable that allergic response to the mites and their catabolites occurs.

Eosinophilic pneumonia is more common in children than in adults because the pulmonary structure of children makes them more liable to atelectasis. Because the main stem bronchus is straighter on the right side than on the left, the disease involves the right lung more often than the left, as might be expected in view of the allergic factor in the pathogenesis.

Excellent therapeutic responses have been reported with ACTH. Rose[11] obtained a dramatic response with doses of 35 mg. every 90 minutes for four doses.

Weingarten[17] reported rapid abatement of tropical eosinophilia when arsenical compounds were given orally, and Fond and Ravenna,[4] in reporting two of the five known cases of the disease in this country, noted very good response to intravenous administration of arsenical compounds.

SUMMARY

A case of the relatively unsual disease of eosinophilic pneumonia (Loeffler's syndrome) is reported. Treatment and etiologic and pathologic factors are briefly discussed.

Elizabeth Hospital, Prairie Grove, Ark. (Riggall).
450 Sutter Street, San Francisco (McGinnis).

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Erythema Nodosum

Treatment with Cortisone by Mouth

ROBERT W. ALBRIGHT, M.D., and MARK J. KUFFEL, M.D.,
Long Beach

CORTISONE has been used in a variety of diseases considered to be manifestations of hypersensitivity in some manner. Such diverse diseases as acute rheumatic fever, acute lupus erythematosus, periarteritis nodosa, dermatomyositis, status asthmaticus, exfoliative and atopic dermatitis, gout, serum sickness, Loeffler's syndrome, urticaria, rheumatoid arthritis, and allergic rhinitis have been treated with cortisone with variable but often excellent immediate results.[1, 3, 5-7, 9-11]

Erythema nodosum is now considered a hypersensitivity disease with a variety of infectious and chemical agents and local trauma acting as the exciting etiological factor in certain predisposed persons. It can be a disabling, uncomfortable disease lasting up to five weeks, and in 10 per cent of cases may enter a chronic smoldering phase extending for three to nine months with further disability.[2] For these practical reasons and because of the theoretical possibility that cortisone would be of benefit, the hormone was used in the treatment of a patient with erythema nodosum who was observed by the authors in consultation. At the time there were no reports in the literature on the use of cortisone in this disease, although recently a report did appear.[12]

REPORT OF A CASE

A 60-year-old white housewife was admitted to the hospital May 27, 1951, with chief complaints of pain in the legs and fever.

The illness began one week prior to admission and was manifested by chills, fever, pain and swelling of increasing severity in the knee and ankle joints, and the presence of multiple tender, reddish nodules over the lower legs, thighs and forearms. There was a pronounced feeling of lassitude, malaise, weakness and anorexia. The patient had also noted definite irregularity of the pulse since the onset of symptoms.

One month before the onset of the current symptoms the patient had had severe infection of the upper respiratory tract.

There was history of rheumatic fever at age 30 without apparent cardiac damage. The patient had not had tuberculosis and had not been exposed to toxic drugs or chemicals. As she had lived in the environs of Long Beach for many years, exposure to coccidioides seemed unlikely.

On physical examination, obesity, moderately severe pain, and marked lassitude were noted. No abnormality was noted in examination of the head and neck. The chest was clear and respirations were 20 per minute. The heart was not enlarged. The pulse rate was 80 per minute, with frequent extrasystoles. There was a soft blowing systolic murmur at the apex, not transmitted. The liver and spleen were not palpable or tender; there were no abdominal masses. On the tibial aspect of both legs were multiple, dull reddish, raised nodules ranging from 1 to 4 cm. in diameter. They were painful and tender to palpation. A few similar lesions were noted on the lateral aspect of the thighs and radial surface of the forearms. The knee and ankle joints were swollen and tender.

Erythrocytes in the blood numbered 4,300,000 per cu. mm. and the hemoglobin content was 13.3 gm. per 100 cc. Leukocytes numbered 8,600 with 62 per cent polymorphonuclear cells and 38 per cent lymphocytes. Results of a serologic test for syphilis were negative. Bigeminal rhythm was noted in an electrocardiogram. There was no growth of pathogenic organisms on cultures of the blood over a two-week period. Results of urinalysis were within normal limits.

On admission the patient was given 50,000 units of penicillin every three hours for a period of five days. During that period the temperature varied from 98.6° F. to 102.6° F. and the general symptoms became gradually worse. On the morning of the sixth day cortisone was given intramuscularly, 100 mg. twice daily. Within 18 hours the skin lesions began definite regression, the joints were less tender and the temperature was normal. The feeling of lassitude lessened and the appetite returned. Cortisone then was given orally, 50 mg. four times a day, and improvement continued. The patient was discharged after ten days' hospitalization with a week's supply of cortisone to be taken at the rate of 200 mg. per day.

On June 15, 1951, when the patient was observed in the office, she reported that the lesions had reappeared and were painful after she had gone 18 hours without cortisone. Another course of one week's duration was prescribed, and at the end of that time the lesions were faded and painless and there was no further swelling or pain in the joints.

DISCUSSION

The erythema nodosum in this case was presumably caused by a previous viral "flu-like" illness. That the initial excellent clinical improvement following use of cortisone was not a spontaneous remission was evidenced by the prompt relapse when the hormone was discontinued for the first time.

As in other diseases manifested by hypersensitivity phenomena, in erythema nodosum cortisone does not alter the fundamental underlying disease. Rather, it changes the bodily response at the tissue level to the noxious agent.[4,8,9] Hence a relapse occurred after the first brief course of cortisone was concluded despite the immediate dramatic and salutary effect of cortisone. However, the immediate relief of fever, arthralgia, constitutional and other symptoms with the prompt regression of the skin lesions was striking and unquestionable, particularly in light of the poor results with penicillin and other measures attempted previously.

The prompt relief of distressing symptoms warranted the use of cortisone from the patient's viewpoint in view of the lack of other efficacious therapy. Whether the disease is actually shortened in any given case is difficult to ascertain because of the variable duration in untreated cases. Early and adequate treatment with cortisone might reasonably be expected to prevent the long duration of the disease which occurs in some 10 per cent of cases.

SUMMARY

In a case of erythema nodosum, prompt remission followed cortisone therapy after treatment with penicillin was ineffective. Brief relapse occurred when cortisone was discontinued. Symptoms abated when a second one-week course of the hormone was given and then did not recur.

135 West 14th Street.

ACKNOWLEDGEMENT

Grateful appreciation is given to Dr. E. Granville Longley for permission to record this case.

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Waterhouse-Friderickson Syndrome

Recovery of a Patient Treated with Cortisone

James T. Fowler, Jr., M.D., *Long Beach*

THE clinical entity of severe meningococcemia with purpura, cyanosis and shock, was until recent years always fatal. Since the advent of penicillin, sulfonamides and adrenocortical extract, a few cases in which the patient recovered have been reported.

The cause of death in this disease is damage to the adrenal glands, either from gross hemorrhage into the organs or degeneration of them as a result of the overwhelming sepsis.

Since the discovery of cortisone, reports of several cases in which the drug was successfully used in treatment have been published.[1, 2]

The following case is reported because it was so severe that the patient probably would have died save for cortisone therapy.

REPORT OF A CASE

A three-year-old white female was admitted to St. Mary's Long Beach Hospital on June 8, 1951, in critical condition. Twelve hours prior to admission, high fever and headache had developed. The patient had spent a restless night and had vomited once. Six hours after the onset of fever, a rash appeared over the body and extremities. At first erythematous and discrete, it gradually became confluent and purpuric. The high fever continued and the child gradually became comatose.

When examined upon admission, the patient was stuporous but could be aroused by stimulation. Cyanosis of the lips and nail beds was noted. The skin was cold and clammy. Petechial and ecchymotic eruptions, the largest 3x4 cm. in diameter, covered the body and extremities. The pulse was barely perceptible and the rate could not be determined. The rectal temperature was 105° F. The patient appeared to be moribund. There was no local or general glandular enlargement. Both ear-drums were intact and normal. A purulent postnasal drip was noted, and the capillary vessels in the pharynx were distended. The pupils were round, regular and equal and reacted to light. No abnormality was noted in percussion and auscultation of the lungs. Percussed, the heart seemed to be normal in size. In stethoscopic examination the sounds were very faint and the pulsation rapid. The rate could not be counted. A reading of the blood pressure was unobtainable. The abdomen was soft and non-tender. The tip of the spleen was palpable. The external genitalia were normal in appearance. The deep reflexes were hypoactive. Superficial reflexes were present. Kernig's sign and Brudzinski's sign were elicited.

An x-ray film of the chest was essentially normal. Except for a pulse rate of 166 to 188 per minute, no abnormality was noted in an electrocardiogram. Erythrocytes numbered 3,640,000 per cu. mm. and the hemoglobin content was 10 gm. per 100 cc. Leukocytes numbered 16,400 with a normal cell differential. The platelet count was 185,640. Many hyaline and fine granular casts were noted in examination of the urine. In the spinal fluid there were 10 lymphocytes per cu. mm. The sugar content was 50.1 mg. per 100 cc. and the protein content 35 mg. No organisms were observed in a smear of the fluid and none grew on a culture.

Gram-negative diplococci grew on a culture of blood taken at the time of admission.

The patient was placed in an oxygen tent and given 25 mg. of cortisone intramuscularly every four hours. Four hundred thousand units of penicillin in aqueous solution and 1 gm. of streptomycin were given intramuscularly immediately, and an infusion of 5 per cent glucose solution was started. Sulfadiazine, 0.1 gm. per pound of body weight per day, was given by mouth several hours later when the patient was able to take fluids by mouth. Four hours after admission the patient's color improved, the blood pressure was 70 mm. of mercury systolic and 40 mm. diastolic, and the pulse rate was 130 per minute. During the next 12 hours there was gradual improvement in the patient's condition and the cyanosis cleared. Small amounts of fluids were taken by mouth. The blood pressure rose to 80 mm. of mercury systolic and 50 mm. diastolic. The rash became more erythematous except for the large ecchymotic areas. For the next three days the patient gradually improved further. The temperature returned to normal and the oxygen was discontinued. On the fifth hospital day the average number of circulating eosinophils was 88.8 per cu. mm. and cortisone was discontinued. The rash gradually disappeared and the patient was discharged on the tenth hospital day.

SUMMARY

A three-year-old child with a severe case of Waterhouse-Friderickson syndrome recovered following treatment with cortisone.

It is believed that cortisone is a valuable aid in treating patients with the disease and in tiding them over the critical phase of the disease.

1228 Pine Avenue.

From The Boyd Clinic, Long Beach.

REFERENCES

1. Nelson, J., and Goldstein, N.: Nature of Waterhouse-Friderickson syndrome, J.A.M.A., 146:1192, July 28, 1951.

2. Newman, L. R.: Waterhouse-Friderickson syndrome, J.A.M.A., 146:1229, July 28, 1951.

California MEDICINE

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Editor, DWIGHT L. WILBUR, M.D. *Assistant to the Editor,* ROBERT F. EDWARDS

Editorial Executive Committee

ALBERT J. SCHOLL, M.D., Los Angeles H. J. TEMPLETON, M.D., Oakland

EDGAR WAYBURN, M.D., San Francisco

For Information on Preparation of Manuscript, See Advertising Page 2

EDITORIAL

The A.M.A. Clinical Session

California will be signally honored next month, when the American Medical Association will hold its 1951 Clinical Session in Los Angeles. The meeting is scheduled for December 4 to 7, inclusive, and will be preceded by the annual Public Relations Conference, which will convene at noon on December 2 and continue through December 3.

Coming on the heels of the December 1-2 meeting of the C.M.A. House of Delegates meeting, the A.M.A. session should be particularly attractive to California physicians.

Interim sessions of the A.M.A. House of Delegates were started several years ago as a means of relieving the House of Delegates of the pressure resulting from twelve months' accumulation of business. As official business meetings the interim sessions tended to expedite the official work of the A.M.A. in a most satisfactory fashion. At the same time, these meetings were of a size which made it possible to arrange them in some of the nation's cities which could not house the huge annual sessions.

When it became apparent that the interim sessions could be held in cities such as St. Louis, Cleveland, Denver, Houston and Los Angeles, it was decided to add to the House of Delegates meetings some clinical sessions, scientific exhibits, technical exhibits and some of the other educational features of the large annual meeting. This has been done with great success, and the resulting meetings have been described as bringing the latest clinical information to all regions of the country which cannot ordinarily be served by the annual gathering.

In fixing the interim meeting in such cities as are listed above, the A.M.A. has wisely relied upon local physicians and institutions in drawing up the program. In this way the physicians in the meeting city have the opportunity of putting on the program for the benefit of their colleagues from other areas. It is evident that the profession in Los Angeles and environs will acquit itself nobly for the benefit of all other sections of the country.

Arrangements for the A.M.A. interim session have been handled through a number of committees appointed by the Los Angeles County Medical Association, and all advance appearances indicate that the entire session will be extremely well run. Los Angeles, honored for the first time with an A.M.A. meeting, has turned to the task with typical vigor and enthusiasm.

Here is a chance for California physicians to visit a full-fledged A.M.A. meeting in their own front yard. Such an opportunity comes seldom and should definitely be grasped.

CALIFORNIA MEDICAL ASSOCIATION

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JOHN HUNTON, Executive Secretary.....General Office, 450 Sutter Street, San Francisco 8
ED CLANCY, Director of Public Relations.....Southern California Office, 417 South Hill Street, Los Angeles 13, Phone: MAdison 8863

NOTICES AND REPORTS

C.M.A. Public Relations Service Available to County Societies

Based upon the simple, down-to-earth formula of "being good, doing good—and then telling the public about it," the much discussed, long planned and long awaited grass roots public relations program of the California Medical Association is now under way.

The plan, initiated by the Advisory Planning Committee,* and approved by C.M.A.'s Council, stresses two major points: the provision of 'round-the-clock medical service regardless of ability to pay, through the full use of existing local facilities and the establishment and activation of public service committee (fee committees or ethics committees) within the county medical societies, where patients may have a hearing and an answer to real or fancied complaints against a member of the profession.

Since all or parts of this program are already in effect in several of the county societies, it is C.M.A.'s hope that eventually the profession may tell all Californians—statewide—of its interest and accomplishments in their behalf.

Once this is done, C.M.A. officials point out, there can be no valid political demand for State Medicine.

The first objective, medical care for all—24 hours a day—requires the organized effort of the societies to see that every person, regardless of financial status, receives the best of treatment on a full-pay, part-pay or charity basis.

An objective analysis reveals that the first phase—the guarantee of medical care—is already being largely met through private physicians and county or other welfare facilities. In other words, all the doctors are, at the present time, caring for all the patients in their particular area regardless of the economic status of any particular individual. Once the program is properly organized, with each member of the profession playing his proportionate part, the story of the doctors' good deeds can be told to the public with complete assurance.

*The Advisory Planning Committee is composed of the following county medical society executive secretaries: Rollen Waterson, Alameda-Contra Costa; Frank Kihm, San Francisco; Robert Wood, Jr., San Mateo; Joseph Donovan, Santa Clara; Roy B. Jensen, Fresno; Vance Venables, Kern; Stanley Cochems, Los Angeles; William Tobitt, Orange; and Kenneth Young, San Diego, together with a representative of the Public Health League, a member of C.M.A.'s legal counsel and C.M.A.'s executive personnel.

ED CLANCY, *Director of Public Relations*

Perfection of the emergency call telephone service throughout the state in areas where this system is not in operation will meet a long recognized public need. At the same time it will quiet the cry of "not enough doctors" and help diminish the threat of the back-door approach of government control of medicine through federal subsidy of medical schools.

C.M.A. will provide the funds for a modest advertising campaign to tell of the availability of the emergency call service.

All advertising will be done under the name of the county society.

The second objective—the protection of the public against certain abuses such as unnecessary or incompetent procedures, excessive fees and unethical acts, imagined or real—will be realized through

GLENN W. GILLETTE

J. L. PETTIS

the establishment of a forum within the society where patients' complaints may be aired. Experience has shown that malpractice actions have decreased in accordance with the degree to which county societies have indoctrinated their members as to the value of all aspects of the program. *It is not the intent that the program shall be approached with the attitude that the patient is always right and the doctor wrong—or vice versa.*

The public relations value to the profession accrues right from the start, by *really* having and recognizing the need of the public for an official body to act on complaints.

Frequently these complaints are no more serious than a misunderstanding between physician and patient on a minor detail. Yet, until or unless it is explained to the satisfaction of the patient a malpractice suit is festering and forging its way to the court house. Good public relations—being good and doing good—can prevent it.

A hearing before a competent, sincere and forthright public service committee is certain to bring about a greater mutuality of satisfaction to all parties than is one conducted in a courtroom.

The elected leaders of C.M.A. recognize that the program will not be accomplished overnight.

In addition, they know—as does the executive personnel of the public relations staff they have employed—of the generally fine public relations currently enjoyed by the profession; and they know that the poor public relations result from the actions of but a small percentage of the doctors. To *further* inform the public of the positive actions of the profession to maintain high medical standards, and to spread the knowledge of the availability of that high type of medical care, while at the same time curing certain sore spots within the profession, is the blueprint of "Operation Public Relations."

The public relations staff will actually be *at the command of the officials of the various county societies.* At the beginning of the program it is expected they will be *invited* to assist the implementation of the public relations objectives in counties where no executive secretary is regularly employed.

It should be emphasized, if emphasis be needed, that all societies are to continue their autonomy in public relations as in all other matters on a local level. C.M.A.'s public relations staff is to be considered *their extra personnel,* to assist only when a request for assistance is made, but to be available for the plans herein outlined and for any other service they can perform for the local society.

By action of C.M.A.'s Executive Committee, John Hunton, Executive Secretary, will have over-all supervision of the new program.

Ed Clancy of C.M.A.'s Southern California office has been named Director of Public Relations. He will continue to make his headquarters in Los Angeles with the exception of the time spent in Sacramento during the sessions of the Legislature where for the past several years he has worked in cooperation with the Public Health League of California.

Two associates, Glenn W. Gillette, formerly of Whitaker & Baxter and more recently the executive secretary of the Fresno County Medical Society, and J. L. Pettis, who has resigned from United Air Lines as assistant to the president, W. A. Patterson, to come with C.M.A., are the other staff members.

Council Meeting Minutes

Tentative Draft: Minutes of the 385th Meeting of the Council of the California Medical Association, Los Angeles, September 22, 1951.

The meeting was called to order by Chairman Shipman at 9:30 a.m., Saturday, September 22, 1951, in Conference Room 5 of the Biltmore Hotel, Los Angeles.

Roll Call:

Present were President MacLean, President-elect Alesen, Speaker Charnock, Councilors Ball, Loos, Sampson, Morrison, Ray, Lum, Green, Pollock, Frees, Thompson, Shipman, Varden and Heron, Secretary-Treasurer Daniels and Editor Wilbur.

Absent for cause: Councilors West, Dau, Montgomery and Bailey.

A quorum present and acting.

Present by invitation during all or a part of the meeting were Vice-Speaker Randel, Executive Secretary Hunton, Assistant Executive Secretary Thomas, Legal Counsel Hassard, Public Relations Director Clancy, public relations representatives Glenn W. Gillette and J. L. Pettis; Mr. Ben Read, executive secretary of the Public Health League of California; county society executive secretaries Waterson of Alameda-Contra Costa, Jensen of Fresno, Venables of Kern, Cochems of Los Angeles, Tobitt of Orange and Wood of San Mateo; Messrs. Clem Whitaker, Jr., and Ned Burman of public relations counsel; Dr. D. H. Murray, legislative chairman; Dr. Ellis Sox of the State Department of Public Health; Dr. Eugene Hoffman; and Dr. Donald Cass and Mr. John McMahon of California Physicians' Service.

1. *Minutes for Approval:*

(a) On motion duly made and seconded, minutes of the 384th meeting of the Council, held June 24, 1951, were approved.

(b) On motion duly made and seconded, minutes of the 227th meeting of the Executive Committee, held July 5, 1951, were approved.

(c) On motion duly made and seconded, minutes of the 228th meeting of the Executive Committee, held August 15, 1951, were approved.

2. *Membership:*

(a) A report of membership as of September 20, 1951, was received and ordered filed.

(b) On motion duly made and seconded, 149 members whose current dues had been received since the last Council meeting were voted reinstatement.

(c) On motion duly made and seconded in each instance, nine applicants were elected to Associate Membership. These were:

Catherine Baird, Wm. Allen Longshore, Jr., and Frank C. Ruys, Alameda-Contra Costa; Dorothy Bartels, San Diego; Frederick G. Bills, Arnold Manson, Eugene Spohn, and C. R. Strickland, San Francisco; Daniel Lieberman, Sonoma County.

(d) On motion duly made and seconded, Dr. Arthur Amos Archart of Monterey County was elected to Retired Membership.

(e) On motion duly made and seconded in each instance, the dues of 10 applicants were ordered reduced for postgraduate study or for protracted illness.

3. *Financial:*

(a) A report of bank balances as of September 20, 1951, was received and ordered filed.

(b) On motion duly made and seconded, the sum of $1,000 was appropriated to cover the cost of office reconstruction to meet present office needs.

(c) Report was made that New Mexico Physicians' Service had made additional repayments of $1.500, reducing its note to the Association to $9,250.

4. *Committee on Industrial Accident Commission:*

On motion duly made and seconded, the Committee on Industrial Accident Commission was authorized to retain additional professional assistance in the current phase of its activities, the present appropriation of $15,000 to cover such cost.

Dr. Frees suggested that a recommendation be made to this committee to work with representatives of the hospital groups in preparing future fee schedules.

5. *Committee on Public Health and Public Agencies:*

Chairman Alesen and Dr. Ray discussed the problems presented by Resolution No. 9 of the 1951 House of Delegates, dealing with the selection of physicians to treat crippled children's cases. Dr. Ellis Sox of the State Department of Public Health stated that his department was willing to work on any objective criteria developed in this line and it was agreed to follow the present criteria until a better system of selection of physicians is developed.

On motion duly made and seconded, it was voted to approve the agreement recently reached with the National Foundation for Infantile Paralysis and discussed at earlier meetings.

On motion duly made and seconded, it was voted to establish a committee to work with the State Department of Public Health and the Rehabilitation Bureau of the State Department of Education in the establishment of a broader interpretation in the selection of physicians for both crippled children's and rehabilitation cases.

Dr. Daniels reported on the joint C.M.A., State Department of Health and California Tuberculosis Association survey of Mendocino County health facilities. The report recommended: (1) The establishment of a full-time health department in Mendocino County either alone or in conjunction with Lake or Sonoma County, as Mendocino sees fit;

(2) the appointment of two assistant county physicians, one in the Fort Bragg area and one in the Willits area to care for county patients in these areas; (3) the hospitalization of county patients in local private hospitals under the care of the county physician and the assistant county physician; (4) the abandonment of the present county hospital as a hospital with its use being continued for an old people's home; (5) Mendocino county to make arrangements with neighboring counties or sanitaria for the hospitalization and care of all tuberculosis patients. On motion duly made and seconded, the Council gave approval to the above program.

The State Department of Public Health and the California Tuberculosis and Health Association have both indicated their agreement with these recommendations.

6. *Committee on Rural Health:*

On motion duly made and seconded, Dr. Henry Randel was appointed chairman of the Committee on Rural Health, a special committee of the Council, and was authorized to select his committee members.

7. *Advisory Planning Committee:*

Mr. Hunton reported that the Advisory Planning Committee had voted to request the appointment of Messrs. Roy Jensen, executive secretary of the Fresno County Medical Society, and J. L. Pettis, C.M.A. public relations representative, as members of the committee, and the reappointment of Mr. Glenn W. Gillette as a member. On motion duly made and seconded, these appointments were voted.

Mr. Hunton also reported on the committee's discussion of the current public relations program and on the first two visits made by C.M.A. officers to the county medical societies. The second such visit was to Merced County, where difficulties have again arisen around the operations of the county hospital. The board of supervisors of the county, after having approved a set of by-laws in consonance with accepted operating standards of county hospitals, has more recently rescinded such action and adopted by-laws which in effect would make the hospital available for all types of cases. A long-range program of public education was suggested to meet this situation.

8. *Legal Department:*

Mr. Hassard reported in detail on the current litigation in San Diego County.

9. *Executive Session:*

At this point the Council went into Executive Session, arising therefrom before proceeding.

10. *Blood Bank Commission:*

Report was made that the Kern County Medical Society had received a gift of more than $50,000 for the construction of a blood bank in Bakersfield, to be known as the Houchin Community Blood Bank. A loan of $15,000 to cover organizational expenses of the blood bank was requested of the C.M.A. loan fund, and on motion duly made and seconded, approval was given for such a loan, to be made under the same conditions and terms as similar loans to other blood banks.

Mr. Hunton reported that Dr. John Upton, chairman of the Blood Bank Commission, had arranged a public meeting in Redding, at which plans were made for the establishment of a blood bank in that city, to serve the northern counties. This would complete the system of 11 blood banks throughout the state previously approved by the Council.

11. *1951 Interim Session of House of Delegates:*

On motion duly made and seconded, it was voted to hold the Interim Session of the House of Delegates at the Hotel Biltmore, Los Angeles, on December 1 and 2, 1951, rather than in the San Francisco location previously voted.

12. *Section Delegates to A.M.A.:*

Motion was made and seconded that the Association defray the expenses to meetings of the A.M.A. House of Delegates of California physicians who are delegates from the A.M.A. sections. On vote, this motion was not carried but the Council agreed that such delegates be extended all courtesies in the facilities of the California delegation.

13. *Student A.M.A.:*

Dr. Donald Cass suggested that the Association defray the expenses of one delegate from each Student A.M.A. chapter to their national meetings and on motion duly made and seconded, it was voted to meet such expenses if the A.M.A. itself does not do so.

Mr. Hunton reported on a conference with a representative of the University of California chapter of the Student A.M.A., at which plans were made for discussion of medical-economic and legal topics with the chapter.

On motion duly made and seconded, the Council voted to accept with regret the resignation of Dr. William Goodrick Donald as C.M.A. representative on the Advisory Committee to the Student A.M.A. chapter at University of California, and to express to Dr. Donald the Association's best wishes for his improved health. It was agreed to leave the naming of his successor in the hands of the Executive Committee.

14. *Public Policy and Legislation:*

Dr. Dwight H. Murray, legislative chairman, and Mr. Ben H. Read, executive secretary of the Public Health League of California, discussed federal and state legislation.

Mr. Howard Burrell, legal counsel for the Association of California Hospitals, discussed a proposed constitutional amendment to come before California voters at the next general election, the effect of which would be to permit the granting of state hospital construction funds to private non-profit hospitals. On motion duly made and seconded, it was voted to approve this proposed amendment, on the understanding that the Association does not favor

federal or state subsidies but approves this provision as a better solution of existing statutory provisions than is now contained in the laws.

15. *California Physicians' Service:*

Mr. John McMahon of California Physicians' Service reported that as of July 31, 1951, C.P.S. had 10,832 physician members and 960,008 beneficiary members. He stated that the conversion of contracts was proceeding rapidly and that it was believed that by the end of 1951 C.P.S. will be able to meet 100 per cent payments on the fee schedule. Payments are now made at 90 per cent.

Dr. Donald Cass, C.P.S. president, reported on the cooperation given by C.P.S. to both the Study Committee and the Fee Schedule Committee and urged that all possible speed be made by both committees.

16. *California State Chamber of Commerce:*

On motion duly made and seconded, it was voted to renew the $1,000 annual subscription to the California State Chamber of Commerce.

17. *American Public Health Association:*

On motion duly made and seconded, it was voted to ask Dr. Louis Regan to represent the Association at the annual meeting of the American Public Health Association.

18. *Committee on Scientific Work:*

Dr. Albert C. Daniels, chairman of the Committee on Scientific Work, requested that Dr. Lawrence White be appointed chairman of the Committee on Local Arrangements for the 1952 Annual Session in Los Angeles, that Drs. Jay F. Crane and George Henry be appointed members of this committee and that the Los Angeles County Medical Association be asked to name two additional members. On motion duly made and seconded, this committee was approved.

19. *Judicial Request on Sex Perversion Cases:*

A letter from a Superior Court judge in Los Angeles County, asking for medical assistance in the consideration and handling of sex perversion cases, was read and ordered referred to the Los Angeles County Medical Association for cooperation in the county area.

20. *Veterans' Administration:*

Dr. Daniels reported that the Veterans' Administration has adopted a new policy which permits VA facilities to admit outpatients for one-day periods, a system which permits the payment of travel expenses and tends to reduce the average stay of hospital patients. On motion duly made and seconded, it was voted to appoint a committee to consider and make recommendations on this matter. Dr. Walter Baro was named chairman of this committee and Drs. Berthel Henning and Albert C. Daniels members.

21. *Public Relations:*

Mr. Clem Whitaker, Jr., public relations counsel, reported that the next general election ballot would carry an initiative measure which would provide numerous medical and hospital services to recipients of old-age assistance.

22. *Woman's Auxiliary to the C.M.A.:*

Dr. MacLean read a letter received from the president of the Woman's Auxiliary to the C.M.A., asking assistance on several items. This was ordered referred to the Executive Committee.

23. *Diabetes Detection Drive:*

On motion duly made and seconded, it was voted to appoint Dr. H. Clare Shepardson of San Francisco as chairman of a committee to cooperate in the Annual Diabetes Detection Drive, the chairman to select his own committee.

24. *Medical Education Funds:*

On motion duly made and seconded, it was voted to refer to the Executive Committee a 1951 House of Delegates resolution asking the establishment of a medical education fund by the Association.

25. California Medicine *Editorial:*

An editorial outlining the objectives of the public relations program was presented to the Council at the request of the Editor and was approved for publication.

26. *Study of Medical Needs:*

Dr. Charnock suggested the consideration of a study of medical care needs throughout the state, on a similar basis to the Mendocino County study already made. It was pointed out that one part of the public relations program would be to investigate any unmet medical needs in all counties.

27. *Time and Place of Next Council Meeting:*

It was agreed to hold the next meeting of the Council in San Francisco on November 11, 1951.

Adjournment:

There being no further business to come before it, the meeting was adjourned at 5:30 p.m.

Sidney J. Shipman, M.D., *Chairman*
Albert C. Daniels, M.D., *Secretary*

Special Announcement

CALIFORNIA MEDICAL ASSOCIATION ANNUAL MEETING

Los Angeles, April 27-30, 1952

The 1952 Annual Session of the California Medical Association will be held in Los Angeles, Sunday, April 27, to Wednesday, April 30, inclusive.

PAPERS: If you have a paper you would like to have considered for presentation, it should be submitted to the appropriate section secretary (see list on this page).

SCIENTIFIC EXHIBITS: Limited space will be available for scientific exhibits. If you would like to apply for space, please write immediately to the office of the California Medical Association, 450 Sutter Street, San Francisco 8, for application blanks. Please indicate *exact* space requirements. No exhibit shown in 1951, and no individual who had an exhibit at the 1951 session, will be eligible until 1953. *No requests for space will be considered after December 1, 1951.*

MOTION PICTURES: There will be facilities available for motion pictures. If you would like to exhibit, send your application to Dr. A. E. Smith, 1930 Wilshire Boulevard, Los Angeles.

All applications for scientific exhibit space and for time on the scientific program should be transmitted as soon as possible. The deadline is December 1, 1951.

ALBERT C. DANIELS, *Chairman,*
Committee on Scientific Work

SECRETARIES OF SCIENTIFIC SECTIONS

Allergy
Grace M. Talbatt,
909 Hyde St., San Francisca 9

Anesthesiology
Nevin H. Rupp,
Veterans Adm. Center, Las Angeles 25

Dermatology and Syphilology
Kenneth L. Staut,
9629 Brightan Way, Beverly Hills

Eye, Ear, Nose and Throat
Robert C. McNaught, Stanford University
Schaal af Medicine, San Francisco 15

General Medicine
J. Malcalm Strattan,
2560 Bancroft Way, Berkeley 4

General Practice
Merlin L. Newkirk,
3224 Santa Ana, Sauth Gate

General Surgery
Paul C. Samson,
2938 McClure Street, Oakland 9

Industrial Medicine and Surgery
Orris R. Myers,
525 Seventh Street, Eureka

Obstetrics and Gynecology
Danald W. deCarle,
2000 Van Ness Avenue, San Francisco 2

Pathology and Bacteriology
Charles M. Blumenfeld,
2907 J Street, Sacramento

Pediatrics
Alvin H. Jacabs,
2201 Webster Street, San Francisca

Psychiatry and Neurology
Cyril B. Caurville,
1801 New Jersey Street, Las Angeles 23

Public Health
Jahn R. Philp,
0170 Civic Center, San Diega 1

Radiology
Rabert K. Arbuckle
Samuel Merritt Haspital, Oakland

Urology
Rager W. Barnes,
1216 Wilshire Baulevard, Los Angeles

In Memoriam

Baccus, Clyde F. Died in Culver City, September 10, 1951, aged 65. Graduate of the University of Illinois College of Medicine, Chicago, 1911. Licensed in California in 1932. Dr. Baccus was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

✤

Coeur-Barron, Frederick H. H. Died in Los Angeles, September 24, 1951, aged 58, of coronary artery disease. Graduate of the College of Medical Evangelists, Loma Linda-Los Angeles, 1924. Licensed in California in 1925. Dr. Coeur-Barron was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

✤

Coulter, James D. Died in Reno, Nev., August 23, 1951, aged 44, of coronary occlusion. Graduate of the University of California Medical School, Berkeley-San Francisco, 1933. Licensed in California in 1933. Dr. Coulter was a member of the Lassen-Plumas-Modoc County Medical Society, the California Medical Association, and the American Medical Association.

✤

Davis, Benjamin F. Died in San Marino, August 26, 1951, aged 67. Graduate of Rush Medical College, Chicago, 1912. Licensed in California in 1938. Dr. Davis was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

✤

Dixon, Howard B. Died in San Francisco, September 21, 1951, aged 63. Graduate of the Hahnemann Medical College of the Pacific, San Francisco, 1913. Licensed in California in 1913. Dr. Dixon was a member of the San Francisco Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

✤

Dolman, Percival. Died in San Francisco, September 16, 1951, aged 76, of coronary artery disease. Graduate of the Cooper Medical College, San Francisco, 1905. Licensed in California in 1905. Dr. Dolman was a member of the San Francisco Medical Association, the California Medical Association, and the American Medical Association.

Gaynor, Joseph. Died in Los Angeles, September 16, 1951, aged 58. Graduate of the Universita Karlova Kagulta Lékárska, Praha, Czechoslovakia, 1920. Licensed in California in 1924. Dr. Gaynor was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

✤

Hutchison, Charles W. Died in Los Angeles, September 18, 1951, aged 68, of coronary artery disease. Graduate of the University of Illinois College of Medicine, Chicago, 1908. Licensed in California in 1910. Dr. Hutchison was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

✤

Rose, Homer D. Died in Sonora, September 26, 1951, aged 69. Graduate of the College of Physicians and Surgeons, Los Angeles, 1914. Licensed in California in 1914. Dr. Rose was a member of the San Joaquin County Medical Society, an associate member of the California Medical Association, and an Associate Fellow of the American Medical Association.

✤

Rowell, William A. Died in Berkeley, September 10, 1951, aged 83. Graduate of the Cooper Medical College, San Francisco, 1891. Licensed in California in 1892. Dr. Rowell was a member of the Shasta County Medical Society, a life member of the California Medical Association, and a member of the American Medical Association.

✤

Sampson, May H. Died in Berkeley, September 21, 1951, aged 81. Graduate of the Cooper Medical College, San Francisco, 1906. Licensed in California in 1906. Dr. Sampson was a member of the Alameda-Contra Costa Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

✤

Sherman, Julius. Died in Palo Alto, August 24, 1951, aged 61. Graduate of the University of California School of Medicine, Berkeley-San Francisco, 1916. Licensed in California in 1916. Dr. Sherman was a member of the San Francisco Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

✤

White, John F. Died in La Mesa, August 15, 1951, aged 77. Graduate of the College of Physicians and Surgeons of San Francisco, 1897. Licensed in California in 1898. Dr. White was a member of the San Diego County Medical Society, a life member of the California Medical Asssociation, and a Fellow of the American Medical Association.

Questions and Answers about C. P. S.

Question: Please clarify the use which C.P.S. intends should be made of the new green envelopes which are marked for the attention of the Medical Director.

Answer: These green envelopes were devised to speed the handling by C.P.S. of claims from physicians on complicated or unusual treatment rendered to C.P.S. patients. Such claims customarily are brought to the attention of the Medical Director, and a saving of time and special medical consideration is effected by having them sent directly to the Medical Director—instead of having them routed through the normal processing channels as is done with routine claims.

Early experience with these envelopes indicates, however, that their purpose is being misunderstood. Instead of restricting their use only to complicated or unusual cases, many physicians are using the green envelopes for routine bills.

In addition, when a claim is sent in the green envelope, it should be accompanied by a short report from the physician, describing the particular problem involved in the case.

Question: For services which are not a benefit of a beneficiary member's C.P.S. contract, can the physician charge his usual fee even though the member's income is below the income ceiling?

Answer: Yes. The terms of a C.P.S. member's contract, which includes the income clause, do not apply for services which are not benefits of his coverage. In other words, the C.P.S. income ceiling does not become a factor unless the services rendered are benefits of the member's contract.

Question: In the new C.P.S. contracts, are x-ray and laboratory services paid in addition to the $50.00 allowance for maternity care?

Answer: No. The $50.00 allowance is applied toward the physician's total fee for prenatal care, delivery and postnatal care, including any x-ray and laboratory services.

Attention: C.P.S. Physician Members

When physicians enclose notes of explanation with bills submitted to C.P.S., the notes and the bills should be attached to prevent them from becoming separated during processing. In addition, the patient's C.P.S. member and group numbers and the physician's name should be listed so the notes can be properly identified if they become separated from the bills.

Question: If 60 days have elapsed since I sent a bill to C.P.S., and I have not received my payment or a rejection, is it advisable to rebill?

Answer: Yes. C.P.S. can virtually guarantee that, within 60 days, a physician will receive payment or a rejection of his bill, or that he will receive communication from C.P.S. regarding the claim. If he has not heard anything about his bill in that time he should, in his own interest, submit a new bill marked "duplicate," or write a letter of inquiry to the C.P.S. Medical Department.

When the physician has not had some kind of action on a bill in two months, there is the possibility that his claim has been misdirected to some other organization. This possibility is assumed from the fact that C.P.S. often receives bills which should have been sent by the doctor's office to a private insurance company or Blue Cross. Conversely, there are probably instances where C.P.S. bills are sent mistakenly to an insurance company or Blue Cross.

Question: Why does C.P.S. stipulate that physicians' bills to C.P.S. must be submitted within six months from the month of service in order to be considered for payment?

Answer: Sound business practice dictates that this regulation be observed. Without the six months' limitation, C.P.S. would not have any way of determining the extent of unreported claims. Obviously, it would not be financially prudent to conduct C.P.S. on that basis. As well as protecting C.P.S., the time limit also allows ample time for physicians to submit bills.

In an instance where the physician did not submit a bill to C.P.S. within six months because of the patient's failure to identify himself as a C.P.S. member, the physician is entitled to bill the patient directly because it is the latter's obligation to make his C.P.S. membership known to the physician.

Question: Sometimes in my work with veteran patients it has been necessary to have services performed outside my office—that is, by radiologists, physiotherapists, clinical technologists or consultants. Even though this referred work has been authorized by the Veterans Administration, there have been instances where I have been informed later that VA cannot pay for it.

Answer: Each authorization is insured for a specific period and this question obviously pertains to instances where the referred work was not performed during the period of authorization. The Veterans Administration will not make payment for services, even though authorized, if they are not performed during the stated authorization period. Reason: Government funds which have been encumbered cannot be used beyond the time stated in the authorization.

NEWS and NOTES

NATIONAL • STATE • COUNTY

FRESNO

Two hundred and fifteen physicians from Fresno, Kings, Madera, Tulare, Kern, Merced, Mariposa and Stanislaus counties attended the Second Annual **San Joaquin Valley Regional Medical and Surgical Institute** held last month in Fresno. Average attendance at each lecture in the two-day program was 150.

The program, planned by a regional committee with Dr. Thomas A. Collins of Fresno as chairman, was one in a series of regional meetings sponsored by the California Medical Association. Arrangements for lecturers were made with the University of California School of Medicine by the C.M.A. Committee on Postgraduate Activities.

Entertainment for the wives of physicians who attended the meeting was arranged by the Woman's Auxiliary to the Fresno County Medical Society.

LOS ANGELES

Postgraduate study primarily designed for the general practitioner will be the theme of the 1951 Clinical Session of the American Medical Association to be held in Los Angeles, December 4 to 7. "Therapy will be stressed in a broad presentation of clinical studies on problems the general practitioner meets in daily practice," Dr. George F. Lull of Chicago, secretary and general manager of the A.M.A., stated, "Subjects of interest to the specialist also will be presented."

The four-day scientific program will include discussions and presentations on urology; general practice; general surgery; cardiovascular disease; industrial medicine and surgery; eye, ear, nose and throat diseases; diseases of the chest, and neuropsychiatry. Others will be on medical banks, radiology, anesthesia and pathology, traumatology as related to civil defense, obstetrics and gynecology, dermatology, internal medicine and pediatrics.

"In addition," Dr. Lull said, "practical clinical discussions, scientific exhibits and general lectures on basic problems are planned."

Color television to demonstrate surgery, clinical treatment and examination procedure will be one of the highlights of the convention.

* * *

Announcement of the appointment of **Dr. Wendell H. Griffith** as professor of physiologic chemistry and chairman of the department in the new University of California at Los Angeles School of Medicine was made last month by Dr. Stafford L. Warren, dean.

SAN FRANCISCO

Dr. Karl F. Meyer, director of the Hooper Foundation for Medical Research, University of California, was presented with the **Lasker Award** at the annual meeting of the American Public Health Association held last month in San Francisco. Dr. Meyer was one of the six medical scientists to receive the award, which is given for outstanding contributions in research related to diseases which are the main causes of death and disability, and for distinguished service in the field of public health administration.

The program for the meeting of the **Northern California Rheumatism Association** to be held November 30 in the Marine Memorial Building, 609 Sutter Street, San Francisco, follows:

6:15 p.m., Refreshments; 7:00 p.m., Dinner.

Business Meeting

Chairman of Symposium—Stacy R. Mettier, president

Differential Diagnosis between Rheumatoid Arthritis and Osteoarthritis—Ephraim Engleman.

Osteoarthritis of the Cervical Spine—Willard G. Snow.

Effects of Posture on Osteoarthritis of the Knee Joint—John J. Loutzenheiser.

Diagnosis and Management of Patients with Malum Coxae Senilis—Frederic C. Bost.

Low Back Pain—S. M. Dorinson.

"Physicians are cordially invited to attend," the association's announcement said; and request was made that those planning to be present send a check for the dinner ($4 per plate) to Frances Baker, M.D., Secretary, No. 1 Tilton Avenue, San Mateo, on or before November 23, 1951.

GENERAL

Prizes of $1000 (first prize of $500, second prize $300, and third prize $200) have been offered by the American Urological Association **for the best essays** on the result of some clinical or laboratory research in urology. Competition is limited to urologists who have been in such specific practice for not more than five years and to men in training to become urologists. The first prize essay will be given a place on the program of the meeting of the American Urological Association to be held at Atlantic City, N. J., June 23 to 26, 1952.

Full particulars may be had from the secretary, Dr. Charles H. de T. Shivers, Boardwalk National Arcade Building, Atlantic City, N. J. Essays must be in his hands before February 15, 1952.

* * *

Appointments in the Regular Navy Medical Corps are open to reserve medical officers on active duty, inactive duty and to civilian physicians, the Navy Medical Department announced recently. Interns may submit applications within the last two months of the completion date of their internship. Interns or other young physicians will not be ordered to appear for a written professional examination. Appointments are open to all ranks, but in the grade of captain the requirement is the possession of outstanding qualifications for special positions as determined by the Surgeon General. Reserve officers on inactive duty and civilian physicians may apply at the nearest Office of Naval Officer Procurement.

At the same time, the Navy announced it would make 176 **Naval hospital internships** available to medical school students graduating in 1952. Prospective interns must meet all requirements for a commission in the Medical Corps, U. S. Naval Reserve, and must serve a minimum of 24 months of active duty from the date they start intern training. Deadline for the submission of applications is January 7, 1952.

Information may be obtained at any Office of Naval Officer Procurement, or by writing to the Surgeon General of the Navy, Bureau of Medicine and Surgery, Navy Department, Washington 25, D.C.

* * *

The American Goiter Association has announced the opening of competition for the 1952 **Van Meter Prize Award** of $300 and two honorable mentions for the best essays submitted concerning original work on the problems related to the thyroid gland. The award will be made at the annual meeting of the association which will be held in St. Louis, May 1 to 3, 1952, providing essays of sufficient merit are presented in competition.

The competing essays may cover either clinical or research investigations; should not exceed 3,000 words in length, and must be presented in English; and a typewritten double-spaced copy in duplicate must be sent to the corresponding secretary, Dr. George C. Shivers, 100 East Saint Vrain Street, Colorado Springs, Colorado, not later than March 1, 1952.

* * *

The first issue of the **Journal of the Student American Medical Association,** a 72-page publication, will make its appearance in January.

To be published nine months of the year—skipping July, August and September when schools are closed—the magazine will have a circulation of more than 33,000. It will be sent to 26,191 medical students and approximately 7,000 interns.

Warren Mullen, University of Michigan Medical School, president of the Student A.M.A., appointed Philip Corso, a senior at Tufts College Medical School, as student editor of the publication. Mr. Corso, who was editor-in-chief of the Tufts *Medical Journal,* has issued a request for "scientific articles which have appeal for the average medical student." Manuscripts may be sent to the S.A.M.A. Executive Office, 535 North Dearborn Street, Chicago.

* * *

The tenth annual meeting of the **American Academy of Dermatology and Syphilology** will be held in Chicago at the Palmer House, December 8 to 13. Principal sessions will be held December 10 to 13, with special courses in histopathology and mycology scheduled for Saturday and Sunday, December 8 and 9, at the medical schools of the University of Illinois and Northwestern University. Special courses in x-ray and radium, bacteriology of the skin, anatomy and embryology of the skin, and special problems in dermatohistopathology will be held Saturday and Sunday at the Palmer House. Further information may be obtained from Dr. John E. Rauschkold, secretary, P.O. Box 6565, Cleveland, Ohio.

* * *

More than 100 dermatologists attended the meeting of the **Pacific Dermatologic Association** in Pasadena in September. **Elected to office** for one-year terms were: President, Dr. Nelson P. Anderson of Los Angeles; vice-president, Dr. C. O'Neal Rich of Salt Lake City; assistant secretary, Dr. Rees B. Rees of San Francisco. Dr. Ervin Epstein of Oakland, secretary-treasurer of the association, was reelected to that post.

BOOK REVIEWS

THE KIDNEY—Medical and Surgical Diseases. By Arthur C. Allen, M.D., Pathologist, the James Ewing Hospital; Assistant Attending Pathologist, Memorial Cancer Center, New York City. 1,115 illustrations. Grune and Stratton, New York, 1951. 583 pages. $15.00.

This unique work belongs in the library of every internist, urologist and pathologist. It covers virtually all fields relative to the kidneys and their diseases; embryology, malformations, tumors, all varieties of acute and chronic medical and surgical types of disorders are discussed. Photographs and photomicrographs are profuse and clear, and the book is well published. Some may object to the notion of a pathologist writing of the physiology and therapy of certain renal diseases; however, there is no inherent reason why only clinicians should attempt clinicopathologic integration, and one finds here a refreshing point of view. The work is highly recommended.

* * *

MEDICAL TREATMENT IN OBSTETRICS AND GYNECOLOGY. By C. Frederic Fluhmann, B.A., M.D., C.M., Clinical Professor of Obstetrics and Gynecology, Stanford University School of Medicine, Fellow American Gynecological Society. Illustrated. The Williams and Wilkins Company, Baltimore, 1951. 157 pages. $3.00.

Dr. Fluhmann has assembled a compendium of practical information, useful especially in the office practice of obstetrics and gynecology. This is a small book of 145 pages in which discussion has been largely eliminated, the space being devoted to simple statements of, and instructions for current therapy and diagnostic procedures. While not every obstetrician-gynecologist will subscribe to all of the recommendations, by and large, highly controversial measures have been avoided, and the suggestions are in line with common practice, or represent minor deviations therefrom.

The first chapter deals with certain investigative and diagnostic approaches and with medical therapy in a wide variety of obstetrical and gynecological conditions. In obstetrics such conditions as habitual abortion, after-pains, the care of the breasts, leg cramps, fetal death in utero, prenatal care, and the toxemias of pregnancy are dealt with. In gynecology, menstruation and its abnormalities, cervicitis, cervical erosion, the relief of pain in carcinoma of the cervix, the climacteric syndrome, contraception, endometrial hyperplasia, the investigation of infertility, kraurosis vulvae, pruritus vulvae, radiation sickness, urinary incontinence, and vaginitis as well as many others are considered.

Chapter two deals with therapeutic measures. "This section lists some of the many therapeutic preparations employed in the practice of obstetrics and gynecology with suggestions as to dosage and also clinical applications." Sub-sections on the sulfonamides and antibiotics and on the hormones of reproduction are included.

Chapter three deals with nutrition. Details of various diets, such as "Reducing Diet," "Salt-free Diets," "Low Residue Diet" are given, as well as a brief discussion of vitamin deficiencies and the use of vitamin preparations.

The fourth and final chapter includes outlines and instructions for certain hospital and office procedures. Preoperative and postoperative routines are given. Basal body temperature, biopsy of the cervix and endometrium, hysterosalpingography, smears for cytological examination, etc., are considered. Culdoscopic and peritoneoscopic examinations are not included.

This book should prove especially useful for the young man just entering practice.

FROM A DOCTOR'S HEART. By Eugene F. Snyder, M.D. The Philosophical Library, New York, 1951. 251 pages. $3.75.

Some have operations and write about them. Some have exotic tropical diseases, and some have coronary occlusions. The writer of this short book is a physician practicing in New York state who had an acute coronary occlusion some few years ago. As part of his convalescence he decided to write his impressions of his own case, of his treatment and of his attending physicians and friends.

Much of the autobiography is in simple language and will be understood by the average patient. A little is technical and a little allusive to many physicians, well known to the profession, but probably mere names to the average potential reader.

The material is presented partly in direct form and partly as recorded conversation between the author, his wife (also a physician) and his son (a potential medical student). Interspersed with the story of his attack, his treatment and his convalescence are flashbacks to the author's youth in Russia and to his early medical career in Czechoslovakia. The many passages bitter at the tyranny of Russian and German fascism cannot have been healthy occupational therapy as far as the patient's cardiovascular system was concerned, but presumably were of some relief to his psyche.

There are many sound points in the book. The author observes that "I have lived long enough on both sides of different curtains . . . to be firmly convinced that the only road to . . . peace is through goodwill, . . . non-appeasement . . . and abolition of suspicion. . . . There was a time when the Mohammedans thought that they could not exist beside the Christians, and the Catholics thought they could not live with the Protestants; but people have learned that they can live together in peace, especially when they do not try to convert each other by force. Respect for others comes through education and common labor which often produce sympathy and friendship."

The influence of the Boston School of Medicine, near which the author has lived for some years, is evident in the tendency to use personal names instead of simple descriptive terms for various pathological and other conditions. This somewhat irritating tendency is offset by a reasonable amount of quotation, partly poetical and partly philosophical. In discussing the aftercare of the cardiac patient, he emphasizes that it is better to be employed and do a little work than to retire completely "unless one possesses enough internal resources to avoid boredom and the feeling of emptiness and futility in retirement." As the Elizabethan poet John Donne wrote, "Be thine own palace or the world's thy jail."

His early career under dictatorships results in frequent allusion to the great privilege of living in America, where there is still freedom. "Of all freedoms and privileges, the right to be different and to think differently is the most precious that democracy can give."

The book is neatly printed and bound, and can doubtless be recommended to many physicians and their patients when faced with the problem of living after their own convalescence from coronary occlusion. It is to be hoped that subsequent editions will omit the rather feeble cartoons and sketches with which the first issue is somewhat liberally interlarded. The foreword by Paul White recommends the book both for its human relationships and its potential usefulness to victims with coronary heart disease.

SOMATIC DEVELOPMENT OF ADOLESCENT BOYS—A Study of the Growth of Boys During the Second Decade of Life. By Herbert Rowell Stolz, M.D., and Lois Meek Stolz, Ph.D. The Macmillan Company, New York, 1951. 557 pages. $9.00.

This monograph may seem expensive, but that is inevitable for first-class bookmaking with such an abundance of photos and graphs. These are well planned and clearly executed. Indeed the whole project was laid out with admirable foresight, as the physical part of the California Adolescent Study on teenage boys in the Oakland schools. It is a longitudinal study, that is, consecutive examinations on the same boys over seven years of pubertal growth. The serial photographs and the expression of growth in terms of gains per year (rather than absolute size) make the study of this book easier than one would anticipate when confronted with such a volume of measurements. The chapter summaries can be read with ease, even by those who do at the moment need the actual basic tabulations—pediatricians and physical educators quite generally. Those who are constantly active in school work, and those engaged in the study of growth, will want to have this monograph at hand for recurrent reading in connection with special boys or special problems.

* * *

PSYCHOTHERAPY. By Paul Schilder, M.D., Ph.D. Enlarged and Revised Edition, arranged by Lauretta Bender, M.D., Associate Professor Psychiatry, New York University College of Medicine. W. W. Norton & Company, Inc., New York, 1951. 396 pages. $5.00.

This is a second edition of the late Paul Schilder's work. The first edition appeared in 1938. The second edition is considerably revised and enlarged by the inclusion of articles, or parts of articles, written prior to the author's death in 1941. This revision is quite appropriately carried out by Dr. Lauretta Bender, who was his wife and who is a psychiatrist of considerable prominence by her own right.

The additional material in the second edition is skillfully introduced and adds to the value of this volume. Of the volume in general, it may be said that it has much basic and valuable work on psychotherapy. The approach is a highly individual one and indicates a very full knowledge of all the various schools in psychiatry and psychoanalysis. The author, however, is quite ready to criticize and point out defects in many of these theories and advocates his own special views.

This book is highly recommended to anyone interested in the problem of psychotherapy.

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PHYSIOLOGY OF THE EYE—Clinical Application. By Francis Heed Adler, M.A., M.D., F.A.C.S., William F. Norris and George E. de Schweinitz, Professor of Ophthalmology, School of Medicine, University of Pennsylvania. with 319 illustrations, including two in color. The C. V. Mosby Company, St. Louis, 1950. 709 pages. $12.00.

Almost twenty years ago Adler realized that a detailed account of the physiology of the eye could not be found in any textbook of ophthalmology or physiology written in English. To meet this need he wrote "Clinical Physiology of the Eye." Although this book was considered an essential volume for ophthalmologists and a valuable reference to others interested in the functions of the eye, only one edition was published. During the past ten years it has become increasingly apparent that a revision of this material was needed. When the author finally began to rewrite he realized that so many advances had been made in the subject that a new book rather than a revision of the old material was needed.

The 22 chapters in the new book may be roughly divided into three sections which deal with (1) the physical properties and physiology of the various parts of the eyeball and adnexa, (2) the functional mechanisms of the eye, and (3) the physiology of vision and visual perception.

Of particular interest to ophthalmologists will be the chapters on the cornea in which the clinical significance of its metabolism and methods of preservation of its transparency are stressed; on the aqueous humor, in which arguments in favor of its formation by dialysis and secretion are set forth with unprecedented clarity; and on the ocular motility, where many practical hints for the correction of strabismus are given.

The internist will find the chapter on the ocular circulation interesting and the neurologist and neurosurgeon will appreciate the material on the neurophysiology of vision and extraocular movements. The book is well written and illustrated and is an excellent coverage of the practical physiology of the eye. It should be one of the pillars of any ophthalmologist's library. It will also be a valuable reference for other physicians and investigators.

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CLINICAL UNIPOLAR ELECTROCARDIOGRAPHY. By Bernard S. Lipman, A.B., M.D., Assistant in Medicine, Emory University School of Medicine, Atlanta, Ga.; and Edward Massie, A.B., M.D., F.A.C.P., Assistant Professor of Clinical Medicine, Washington University School of Medicine. The Year Book Publishers, Inc., 200 East Illinois Street, Chicago, 1951. 232 pages. $5.00.

This monograph on clinical unipolar electrocardiography is a very welcome addition to the books that have been published on the subject in the last several years. The authors have had considerable experience in clinical cardiology and electrocardiography and the seasoned comments in regard to the interpretation reflect this experience.

The book consists of a systematic discussion in simple language of the electrophysiology of the heart and the physiological bases of electrocardiographic abnormalities. Subsequent chapters describe the characteristic patterns seen in normal subjects, in those with left and right ventricular hypertrophy, in right and left bundle branch block and myocardial infarction. The discussion is direct and easy to follow; it is illustrated by excellent line drawings and, at the end of the book, by a series of actual electrocardiograms. Every effort has been made to present electrocardiography in a rational and not an empirical manner.

The book can be highly recommended as a simple, sound presentation of current electrocardiographic diagnosis and interpretation. Colleagues of the reviewer who have seen the book have stated that it is one of the easiest to read and understand of the current texts.

It is hoped in future editions that the subjects of vectorcardiography and the ventricular gradient will be given adequate discussion.

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VISCERAL RADIOLOGY. By Emerik Markovits, M.D., formerly Scientific Collaborator of the Central Radiologic Institute of the General Hospital, Vienna; Head of the Radiologic Department of Elizabeth Hospital of the City of Budapest; Radiologist of the Steiner Cancer Clinic, Atlanta, Ga. The Macmillan Company, New York, 1951. 612 pages. $24.00.

This interesting book is a compressed radiological diagnostic treatise, with liberal sections on differential dignosis. The author takes up his subject under six main sections: respiratory system, circulatory system, digestive system, gastrointestinal system, genitourinary system and central nervous system.

The subject matter is treated in somewhat didactic fashion, and is illustrated more often by line drawings or diagrams than by roentgenograms. Many of the line drawings are excellent and should be of use to the beginner in radiology. Most of the roentgenograms are adequate.

The sections on pulmonary and cardiac lesions reflect the earlier teachings of the Viennese school of medicine and radiology. Those of the gastrointestinal and abdominal areas reflect an even earlier school. For example, the author has sections on gastroptosis and other conditions, which can scarcely be regarded as consistent with modern concepts.

Considering the broad scope of the undertaking, the author can be regarded as having made a remarkably compact contribution. The text is clear; the indexing adequate for the purposes at hand.

* * *

CHEST X-RAY DIAGNOSIS. By Max Ritvo, M.D., Assistant Professor of Radiology, Harvard Medical School; Instructor in Radiology, Tufts Medical School; Roentgenologist-in-Chief and Director, Department of Radiology, Boston City Hospital. 615 illustrations on 418 engravings and a colored plate. Lea & Febiger, Philadelphia, 1951. 558 pages. $15.00.

This fairly thick monograph covers the x-ray diagnosis of diseases of the chest in a series of ten sections. These sections are as follows: Lungs, mediastinum, diaphragm, pleura, bony thorax and soft tissues, soft tissues of neck, heart and great vessels, aorta, pulmonary artery and pericardium. The introductory section is sound, and the suggestions for methods of studying the roentgenograms are well laid out.

The author considers roentgenography before roentgenoscopy, which is perhaps the reverse of the ideal method of examining the chest. He implies, but does not stress adequately, the need for thorough examination. The average physician would never be content with a single posterior-anterior film of the gastrointestinal tract, by a single anterior-posterior urogram in studies of the urinary tract. However, all too many physicians attempt to reach decisive conclusions on the basis of just a single posterior-anterior roentgenogram of the chest.

One would prefer that lateral and oblique illustrations accompanied the posterior-anterior views reproduced extensively throughout the book. These reproductions are fortunately in negative form and of good quality. There are a few statements in the text and a few legends which might bear revision in the next edition. For example, on page 20 is an illustration of a rather overexposed roentgenogram of a young patient with the heading, "Normal Chest." It might be more precise to say "negative chest" or "healthy chest."

Similarly, on page 96 is an illustration entitled "Bronchitis." It is generally accepted by most radiologists and pathologists that the diagnosis of bronchitis from a single posterior-anterior chest roentgenogram is not only difficult but hazardous. On page 97 appears the statement, "An attack of acute bronchitis may reactivate an old inactive tuberculosis." Even if correct, this appears somewhat tautologic in a work of this type.

The illustration on page 478 entitled "Myocardial Calcification" looks more like calcification of the mitral annulus to this reviewer. Perhaps the author had autopsy verification of the legend, and if so this might be noted in the next edition.

The volume is well printed and well bound. The index is adequate.

HOPE AND HELP FOR THE ALCOHOLIC. By Harold W. Lovell, M.D., Doubleday & Company, Inc., Garden City, New York, 1951. 215 pages. $2.75.

This book is directed to the alcoholic, and perhaps even more to his relatives and friends, on whose shoulders falls the burden of seeing that he is treated. Considering the incidence of the condition, it should have a good sale.

In spite of having been written for the lay reader, it is quite well done and contains much less information of questionable authority than many scientific works dealing with this subject. The factors underlying alcoholism as a disease are presented, as well as the facilities, medical and religious, for its relief. All of this should be of interest to the physician, who is frequently called on to advise the family in regard to the treatment of alcoholics. The author's conclusion is that, much as medicine has contributed to an understanding of the psychopathology of alcoholism, the results of medical treatment are far from satisfactory, and Alcoholics Anonymous can claim a better batting average than can the psychiatrist.

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OPERATIVE SURGERY. By Sir Lancelot Barrington-Ward, K.C.V.O., Ch.M., F.R.C.S. (Edin.), F.R.C.S. (Eng.), Surgeon to H.M. King George VI, Senior Surgeon, Hospital for Sick Children, and to the Royal Northern Hospital, London, etc. Second Edition, with 498 illustrations. Grune and Stratton, New York, 1951. 638 pages. $13.50.

Most American books on surgery that emphasize the technical aspects of surgery tend to be rather highly specialized and limited in scope or excessively voluminous. The appearance of this English book on operative surgery in a single volume is appealing, and the book represents the practices of a group of 16 outstanding English surgeons all working in the same hospitals. It is an integrated volume which has the advantages of contributions by a versatile group of special surgeons who mutually understand each other's thoughts and techniques. To make the book practical and keep it concise, yet broad in scope of material discussed, one good standard procedure for each operation has been given rather than tabulate a wide variety of procedures for the same operation. General surgery, plastic surgery, head and neck surgery, orthopedic surgery, neurosurgery, and genito-urinary surgery are covered. The illustrations are clear and good.

From the reviewer's standpoint the techniques advocated are fundamentally sound but rather antiquated and not too refined as modern surgical procedures are practiced in most surgical clinics in this country. Incisions in skin creases are not stressed, even in the hand where longitudinal incisions crossing skin creases may result in deformity and impaired function, aseptic bowel techniques are not mentioned, continuous suture lines are generally illustrated throughout, and many of the techniques on the simpler surgical procedures, as around the anus, are apt to be troublesome if commonly practiced by the general surgeon. The book is good but not outstanding. It will have little appeal to specialists, for the discussion of each special field is rather limited. The general practitioner doing surgical work will find rapid help to practical problems in this book, and by and large sound practice will result from following its recommendations.

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THE EARLY DIAGNOSIS OF THE ACUTE ABDOMEN. By Zachary Cope, B.A., M.D., M.S. Lond., F.R.C.S. (Eng.), Consulting Surgeon to St. Mary's Hospital, Paddington, Late Hunterian Professor, Arris and Gale and Bradshaw Lecturer, Royal College of Surgeons. Tenth Edition. Oxford University Press, New York, 1951. 270 pages. $3.50.

This is the tenth edition of a book which has become a classic in the early diagnosis of the acute abdomen. It is clearly and concisely written, adequately illustrated with diagrammatic and understandable drawings and x-rays, and

covers in excellent fashion the differential diagnosis of the acute abdomen. It affords the physician the background of information essential to evaluate an acute abdomen and to attain therapeutic judgment. It is small, compact, can be read with advantage in a few hours, and will serve as a handy reference book for student, general practitioner, and specialist alike. It is recommended for perusal or study by any physician encountering acute abdominal conditions in practice. It is a valuable contribution to medical literature and deserves to be in the library of practicing physicians.

* * *

CHILDREN'S RADIOGRAPHIC TECHNIC. By Forrest E. Shurtleff, R.T., The Children's Medical Center, Boston, Massachusetts. Lea & Febiger, Philadelphia, 1951. 80 pages. 32 illustrations. $3.75.

This modest volume is designed as an aid to technicians and physicians who are familiar with radiographic procedures in general but who, nevertheless, have difficulty in obtaining satisfactory films of the non-cooperative children whom they must occasionally examine. The author's experience is based upon a large number of studies at the Children's Medical Center in Boston.

The chief contribution of this book is a section of 25 pages quite thoroughly outlining rapid exposure techniques for different parts of the body and for children of varying ages. This section is worth more than the price of the book for those without the time or experience to make their own exposure charts.

There are a number of helpful suggestions for positioning and immobilizing small patients. There are good directions for obtaining rhinograms and tracheograms.

The volume does not quite fulfill the publisher's announcement that it is a thorough presentation of the radiographic studies of diseases and anomalies of children.

* * *

A PRIMER FOR PSYCHOTHERAPISTS. By Kenneth Mark Colby, M.D., Adjunct in Psychiatry, Mount Zion Hospital; Clinical Associate, San Francisco Institute of Psychoanalysis. The Ronald Press Company, New York, 1951. 167 pages. $3.00.

Like most technical procedures, psychotherapy is best learned under the supervision of an experienced therapist. The author of this little volume on psychotherapy admits that he is not presenting anything which is new and unique, but rather he addresses himself to beginners in this field: internists and residents in psychiatric hospitals and clinics, clinical psychologists, psychiatric social workers, and practicing psychiatrists (for the latter, obviously suggesting that they adopt methods and techniques recommended by him). He explains his approach as essentially psychoanalytic, but the actual procedures he describes are far from the orthodox classical psychoanalytic techniques in that communications from the patient are not so much free association, there is less emphasis on the interpretation of dreams, and the therapist, in general, is more "active." Following a brief description of basic theory, the organism, the ego, the environment, and the kind of patient who comes to the psychiatrist, the author emphasizes "in abstraction," the "most suitable" and the "less suitable" type for therapy, and the requirements and qualifications of a good psychotherapist. Such practical considerations as the length of interview, how to handle tardiness on the part of a patient, attempts of the patient to prolong the interview, the use of the couch, what to do when the patient weeps, when he offers gifts, whether or not to take notes during the interview, etc., are presented.

The technique of the first interview is described in detail with several simple clinical examples, with emphasis being on two aims, "to formulate from the facts a working clinical and dynamic diagnosis, and to acclimatize the patient to the interview methods and procedures of psychotherapeutic work." To accept a patient for treatment is generally not difficult if the patient expresses a wish and need for treatment, but the author's examples of when he declines to treat some patients are not so convincing. Patients sometimes express a conscious unwillingness to continue under psychiatric care, but when this is adequately handled therapy may proceed. The author emphasizes, however, and rightfully so, that one should not threaten a patient into therapy. Very practical problems, such as what to do about a patient who requests a prescription for drugs and how to handle relatives, are discussed in a realistic and helpful fashion. The author regards the latter problem as a "mixed blessing," and he emphasizes that "no friend or relative of the patient in therapy should be seen by the therapist without the spoken knowledge and permission of the patient." The middle course of therapy is discussed in terms of the value of interpretations, how and when they are present, in what dosage, how resistance is handled and modified, and the meaning and handling of the "transference." The last chapter deals with the modified methods of treatment of the "schizophrenias." This is rather brief and sketchy, and refers essentially to those cases who are regarded as "ambulatory" or "latent" that one may see in office practice rather than in hospital work.

The author's style is simple and direct and without pretense. He emphasizes the limitations of psychotherapy, and warns the neophyte not to set his goals too high. This volume can be well recommended to the beginner in psychotherapy if he will constantly keep in mind that there is no substitute for supervision.

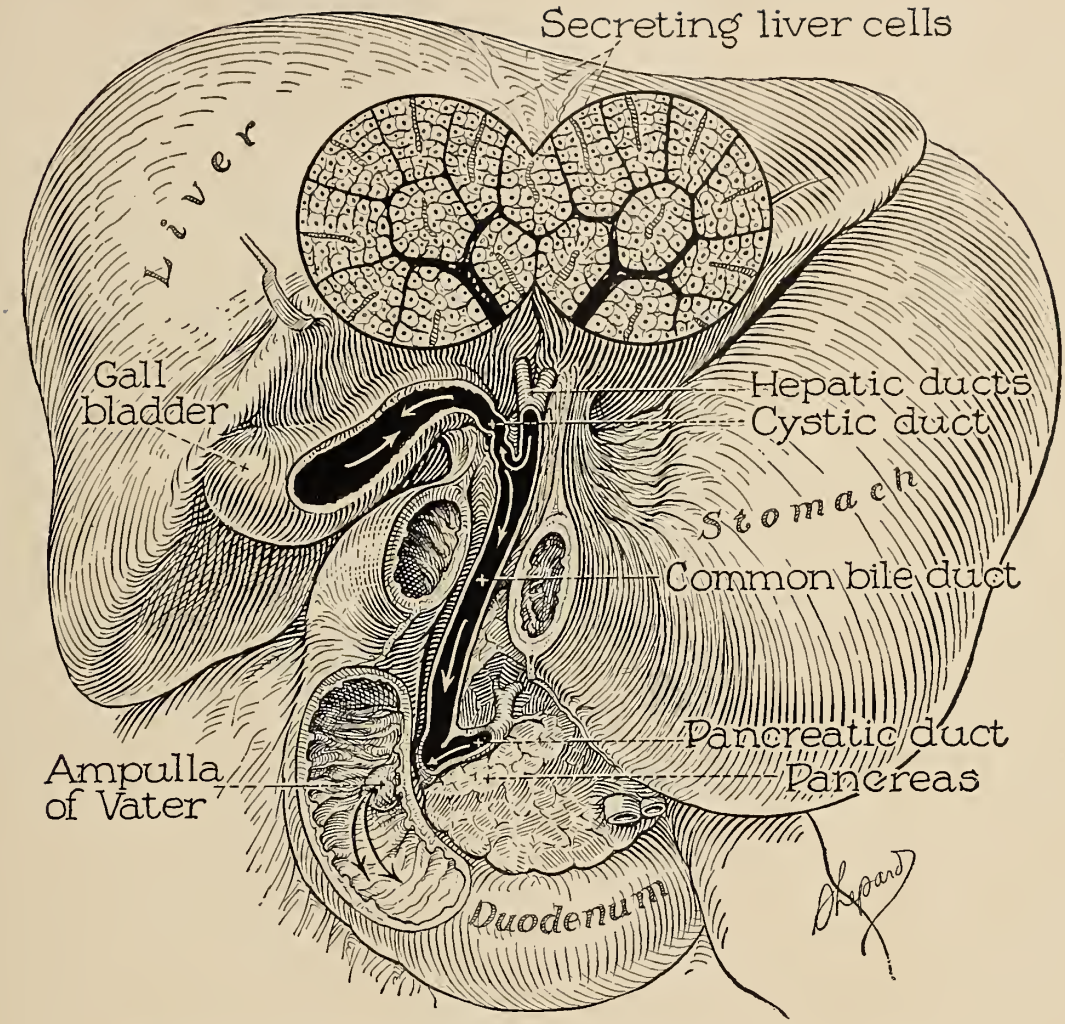
* * *

ALLERGY IN RELATION TO PEDIATRICS. By Bret Ratner, M.D., Professor of Clinical Pediatrics (Allergy) and Associate Professor of Immunology, New York Medical College. An official publication of the American College of Allergists. Bruce Publishing Company, St. Paul, Minn., 1951. 228 pages, $3.75.

The subject matter of this volume has been prepared by 16 well qualified pediatric allergists, all of whom are connected with pediatric departments in large universities or teaching hospitals, located in various sections of the United States, where they have the opportunity of seeing large numbers of allergic children.

In the reviewer's opinion, this book is invaluable to the pediatrician, for it is a well recognized fact that he is dealing with allergic conditions in from 30 to 50 per cent of his patients, depending on the locale in which he is practicing.

The contents include specialized knowledge of the fundamentals of allergy, and present well organized discussions on accepted methods of investigation and treatment. Several chapters merit special comment. Dr. Bret Ratner introduces the subject by giving a brief but very comprehensive chapter on "The Genesis of Allergy." The chapter by Dr. M. Murray Peshkin—"Critical Evaluation of Diagnostic Test for Sensitization in Infancy and Childhood," is of particular interest at this time. He clarifies and properly evaluates the role that skin tests play in the study of the allergic child. He discusses each phase of the study in order of its importance, namely: history, physical examination, laboratory procedures for determining endocrine dysfunction, blood studies, x-rays, and lastly, various methods of testing with allergens, including skin tests. Dr. Lewis Webb Hill, in his chapter on "Significance of Skin Tests," also emphasizes the fact that skin tests are helpful but certainly not infallible. Dr. Ben F. Feingold demonstrates with very interesting graphs the dual role infection plays in allergy. He, also, briefly reviews the literature on that subject. The remaining chapters maintain the high standard exemplified by the ones reviewed above. The volume is extraordinarily useful due to the splendid bibliography prepared by each contributor.



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SEARLE RESEARCH IN THE SERVICE OF MEDICINE

SYPHILIS REPORTED LEADING CAUSE OF BLINDNESS AMONG INDIGENTS

Syphilis ranks first among the 10 leading causes of blindness among indigents in Ohio, a 10-year survey disclosed.

The findings of the survey were presented by Dr. Charles R. Freeble Jr., chief of the division of communicable diseases, Ohio Department of Health, Columbus, and James F. Donohue, health program specialist of the United States Public Health Service, in a recent issue of the *Journal of the American Medical Association.*

During the 10-year period—1939 through 1948—6,442 persons were declared legally blind in Ohio on applications for financial aid. Of this total, the article stated, 4,015 persons became blind from undetermined causes.

Of the 2,427 persons whose causes of blindness were known, 507 (20.9 per cent) lost their sight as a result of syphilis, according to the report. Causes of prenatal origin accounted for 502 cases of blindness, diabetes ranked third with 331 cases, injury fourth with 326 and vascular disease fifth with 147. Gonorrhea, another venereal disease, was low on the list, being blamed for 25 cases, 23 of which involved newborn.

The cases attributed to syphilis represented 7.9 per cent of the 6,442 persons declared legally blind. The report added, however, that "many of the persons in whom cause was not specified or for whom the cause was attributed to 'prenatal origin' undoubtedly were also blinded by syphilis. The figure quoted indicating that syphilis accounted for 20.9 per cent of those persons in whom the cause of blindness was specified perhaps represents a more realistic estimate of the size of the problem."

Regardless of race, the number of males whose syphilis resulted in blindness outnumbers the females two to one, it was reported.

"It is believed that this apparent sex difference is due to the fact that the males, being the breadwinners, are likelier to apply for financial assistance, rather than any real difference in syphilis predisposing to blindness according to sex," the report pointed out.

Although the 1940 census showed the ratio of whites to Negroes in Ohio to be 19 to 1, the ratio of whites to Negroes blinded by syphilis is approximately 2 to 1 for both males and females, it was stated in the report. The syphilis prevalence also was estimated at 2 to 1.

Some of those blinded by syphilis were born with the disease, and became blind during childhood or adolescence. However, the article calculated the median age at loss of sight was about 42 years, and the average age of reported infection of syphilis was 25 years.

The report pointed out that during the 10-year period no significant decrease in percentage is noted despite the fact that intensive venereal disease control activities were in effect in Ohio during the same years.

"Our study suggests that an average 17-year period exists between initial infection and loss of sight, which would indicate sufficient time for the

(Continued on Page 54)

WHETHER CANCER VICTIM SHOULD BE TOLD DEPENDS ON PATIENT

Whether or not it is advisable to tell a patient that he has cancer depends upon the way he manages other life situations.

A person who has a realistic approach to life in general should be told, in the opinion of Drs. Nathan S. Kline, director of research at the Worcester State Hospital, Worcester, Mass., and Julius Sobin, of the Veterans Administration, Newark.

The problems involved in such a disclosure were discussed in a recent issue of the *Journal of the American Medical Association.*

In the past 10 years, according to the article, the attitudes of cancer patients have altered significantly, and one of the greatest problems is the psychological management of these cases.

"Improved methods of cancer detection and public education on the subject means that physicians are seeing and treating many more malignant lesions than ever before," the report stated. "More widespread lay knowledge about cancer has almost resulted in a situation in which 'every man is his own diagnostician.'

"Formerly, cancer was almost unmentionable between patient and physician, and most persons did not wish to know nor expect to be told of such diagnoses.

"The pendulum has swung far in the opposite direction, and, along with its benefits, the educational campaign has resulted in an almost national cancerphobia."

If the patient is told he has cancer, the report pointed out, the truth should be given in easy stages to alleviate, as much as possible, the severe psychological shock. Immediate reassurance as to the nature of the treatment should be given to the patient so that he will feel that everything is not hopeless and everything possible is being done for him.

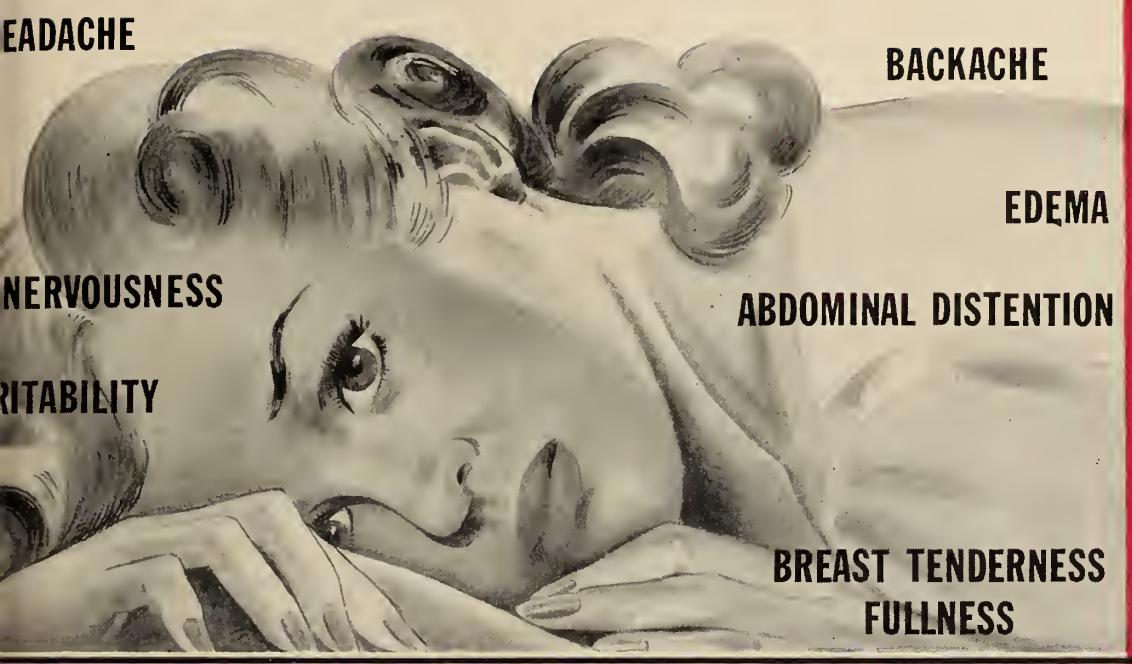
Whether or not his family should be told, and if so, how, should also be reviewed in detail by the physician and the patient, according to the article. Some member of the family should be informed of the patient's condition.

"If it is found desirable to conceal from the patient the nature of his illness," according to the report, "it is usually wise to substitute some other condition. As the symptoms progress, the patient will inevitably know that something is wrong with him, and, if he is able to attribute it to some relatively benign condition, he will at least have the consolation of 'understanding' the cause of his complaints."

At all times, the patient should be encouraged to continue with his regular job as long as possible, the article stated. He should also be encouraged to interest himself in substitute activities. The family should spend as much time as possible with the patient, but at no time should the patient be reminded of his "tragedy."

"It is most desirable, of course, that the patient accept the fact of his disease, and that he plan the remainder of his life accordingly," the report declared. "However, at times, when the diagnosis is beyond question and can be substantiated by labora-

(Continued on Page 68)



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SYPHILIS REPORTED LEADING CAUSE OF BLINDNESS AMONG INDIGENTS

(Continued from Page 50)

medical profession to diagnose and adequately treat these persons in order to prevent the appearance of this complication in a large percentage," the report stated.

"This certainly presents a strong argument for intensive case-finding activity not only for the infectious stages of the disease, but also for those persons with hitherto unsuspected latent syphilis."

In blindness due to syphilis, the wasting away of the optic nerve is by far the greatest factor, according to the article, accounting for more than two-thirds of the total cases. However, it is apparent that the disease is also capable of attacking and destroying the function of all other parts of the eye, it was pointed out.

"The implied financial loss to both the person and the taxpayer who must support the afflicted is in itself another strong argument for intensification of syphilis case-finding and treatment activities by public health agencies, as well as by individual practicing physicians, in an application of the principles of preventive medicine," the report added.

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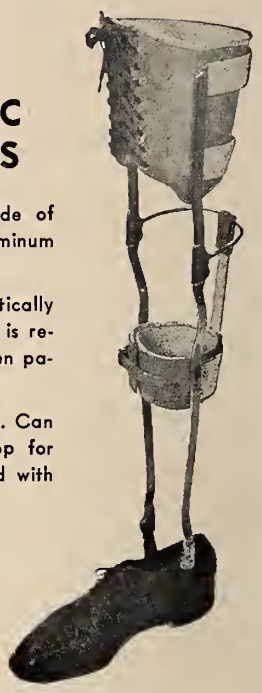

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OUTLOOK FOR REHABILITATION OF PARAPLEGICS MUCH BRIGHTER

The outlook for the rehabilitation of paraplegics and others with spinal cord injuries is much brighter, according to a report in a recent issue of the *Journal of the American Medical Association.*

The results of a study of paraplegic patients and others with spinal cord injuries were presented by ten doctors associated with the department of nervous and mental diseases of Northwestern University Medical School, Chicago, and the department of medical neurology at the Veterans Administration Hospital, Hines, Ill. .

Not many years ago the general opinion was that only a few paraplegics could be expected to survive the many complications facing them. Those who did survive, it was believed, could look forward to little more than a totally incapacitated life.

Of 767 specific cases reported in the survey, only 17 deaths (2.2 per cent) occurred.

Many new and highly technical operations to alleviate pain, spasms and bedsores were discovered and put into practical use, according to the report. Many new methods of controlling and restoring normal body functions were found. Surgery was performed in many cases in hope of correcting the injury. New drugs were used to combat infections and diseases.

"A program for physical medicine and rehabilitation is one of the most important parts of the management of the residuals of injuries to the spinal cord," according to the report.

"It contributes to the general well-being of the patient at a time when treatment may be limited to bed activities, and it becomes progressively useful as time and achievement develop. It has been found to be beneficial in increasing appetite, weight, and general strength; in improving circulation, probably in preventing the further development of bedsores, both because dexterity of movement in avoiding injury is developed and a good state of health is promoted."

Many patients, the report stated, have since been discharged from the hospital and are now going to school or are working.

"A comparison was made of the rehabilitation effected when the patient had been injured under battle conditions and subjected to treatment limited by the conditions of war, and the rehabilitation effected when the patient had been injured under conditions comparable to civilian life and had then found his way to this hospital," the article pointed out.

"It was found that the civilian type of patient attained effective levels of rehabilitation in a shorter time than the patient injured in battle. It may be possible that the civilian patients were not subjected to complicated wounds and that they received definite treatment earlier. It is also true that the time after injury plays an important role in final achievement."

Those who participated in the report were Drs. Lewis J. Pollock, Benjamin Boshes, Isidore Finkelman, Herman Chor, Alex J. Arieff, Meyer Brown, Knowlton E. Barber, Joseph G. Kostrubala, Louis B. Newman and Benjamin H. Kesert.

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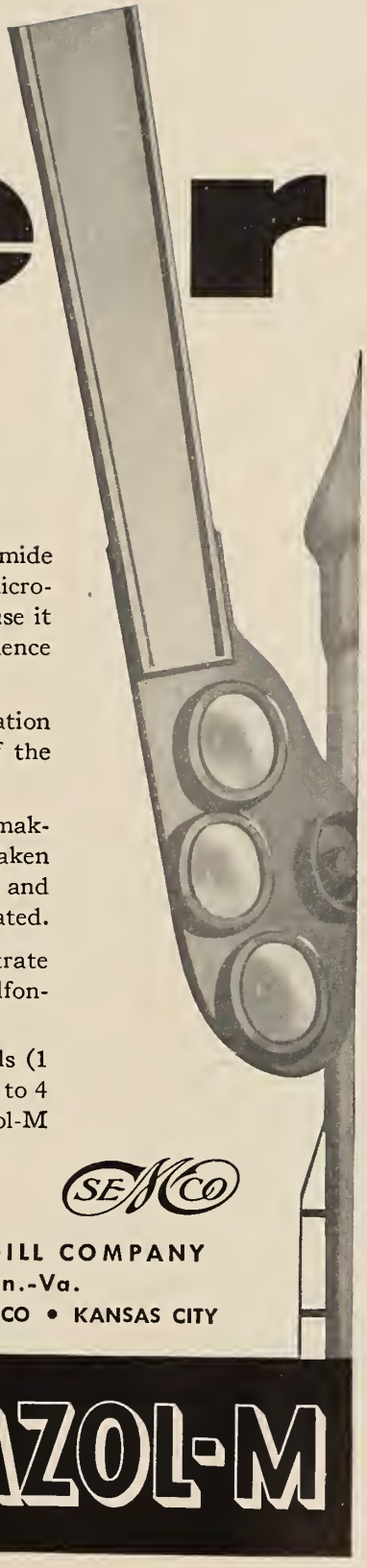

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WHETHER CANCER VICTIM SHOULD BE TOLD DEPENDS ON PATIENT

(Continued from Page 50)

tory and x-ray reports, the patient refuses to believe the inevitable facts. He may then resort to visiting a great number of other physicians. This provides a hope of escape.

"The greatest danger in cases of patients who refuse to accept the diagnosis, when it has been felt desirable to tell them, is that instead of seeking reputable medical assistance, they become victims of various charlatans. The patient should be prevented from falling into the hands of quacks."

At times, according to the article, patients will lose touch completely with reality, and should be referred to a psychiatrist. Other patients will develop compensatory outlets, the most frequent of which is turning to "religion."

Where complete physical collapse or severe and prolonged depression occurs, hospital or psychiatric treatment is recommended.

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PRENATAL CARE SAVES EXPECTANT MOTHERS WITH HEART CONDITIONS

Adequate prenatal care of the expectant mother suffering from heart disease will reduce the maternal mortality rate of such patients, according to a report in a recent issue of the *Journal of the American Medical Association.*

Four Chicago doctors — James E. Fitzgerald, Augusta Webster, Bruce P. Zummo and Philip C. Williams—studied the records of the Cook County Hospital, Chicago, over an 11-year period (July 1936 to July 1947). They found that deaths of such mothers usually occur among those with inadequate or no care during pregnancy.

The hospital's records showed 55,938 mothers were delivered of viable infants. Of these women, 704 had organic heart disease. The hospital's cardiac clinic treated 460 prenatally; 244 were not seen by the clinic.

"It is evident from the material reviewed that there were many with severe cardiac disease among the 460 women with organic heart defects followed in the prenatal cardiac clinic," the report said. "However, all these women, with three exceptions, were delivered safely.

"There were 244 women with organic heart disease who were not seen in the cardiac clinic, and from this group there were 21 deaths."

The Chicago doctors pointed out that marriage and pregnancy call for a reevaluation of the func-

(Continued on Page 74)

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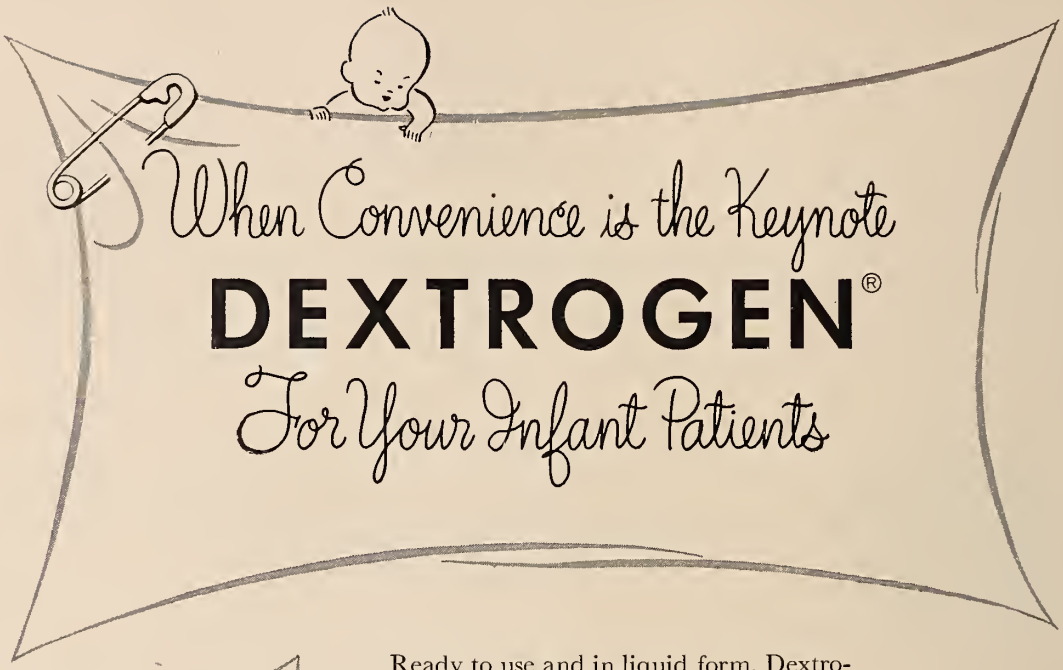

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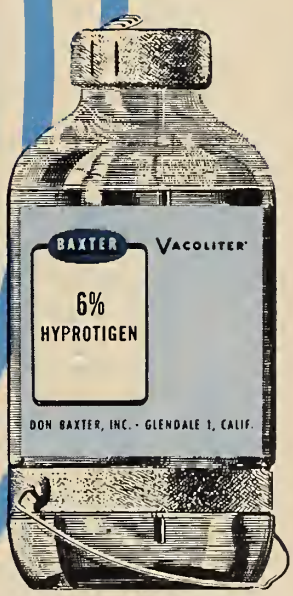

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PRENATAL CARE SAVES EXPECTANT MOTHERS WITH HEART CONDITIONS

(Continued from Page 69)

tional capacity of a woman's heart. The pre-pregnancy classification offers a good index of what may be expected, they said.

In the treatment of pregnant women with heart conditions, the clinic uses a diet which supplies food essentials but which at the same time avoids causing digestive distress. Usually it is low in caloric value, salt and fat, moderate in carbohydrate and high in protein. Every effort is made to keep the patient's total weight gain at 20 pounds.

Bed rest is encouraged. All patients are asked to rest one hour and preferably two each afternoon. They are instructed to sleep at least eight hours each night.

"Bed rest constitutes the most effective single therapeutic agent in the treatment of heart disease," it was pointed out. They added:

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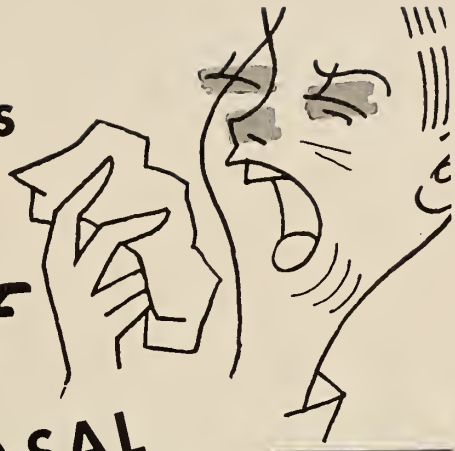

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*Prigal, S. J., and Furman, M. L.: The Use of Bacitracin, a New Antibiotic, in Aerosol Form; Preliminary Observations, Ann. Allergy 7:662 (Sept.-Oct.) 1949.

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BOOKS RECEIVED

BACTERIAL AND VIRUS DISEASES: Antisera, Toxoids, Vaccines and Tuberculins in Prophylaxis and Treatment—H. J. Parish, M.D., F.R.C.P.E., D.P.H., Clinical Research Director, Wellcome Foundation Ltd. Second Edition. The Williams and Wilkins Company, Baltimore, 1951. 204 pages. $2.50.

CHANGING YEARS, THE—Madeline Gray. Doubleday & Company, Inc., 1951. 224 pages. $2.75.

DOCTOR'S PILGRIMAGE, A—Edmund A. Brasset, M.D., J. B. Lippincott Company, Philadelphia, 1951. 256 pages. $3.50.

FROM DUGOUT TO HILLTOP—Margaret R. Stewart, M.D., Murray & Gee, Inc., Culver City, 1951. 233 pages. $3.75.

HANDBOOK OF OPERATIVE SURGERY OF THE STOMACH AND DUODENUM—Claude E. Welch, M.D., Associate Visiting Surgeon, Massachusetts General Hospital; Clinical Associate in Surgery, Harvard Medical School. The Year Book Publishers, Inc., 200 East Illinois Street, Chicago. 1951. 349 pages. $8.50.

HEALTH OF THE MIND—J. R. Rees, M.D., Director, World Federation for Mental Health. W. W. Norton & Company, Inc., New York, 1951. $2.75.

HOMOSEXUAL IN AMERICA, THE—A Subjective Approach—Donald Webster Cory. Greenberg: Publisher, 201 East 57th Street, New York 22, 1951. 326 pages. $4.00.

HORMONES AND BODY WATER—Robert Gaunt, Ph.D., and James H. Birnie, Ph.D., Department of Zoology, Syracuse University, Charles C. Thomas, Publisher, Springfield, Illinois, 1951. 57 pages. $2.25.

HUMAN BIOCHEMISTRY—3rd Edition—Israel S. Kleiner, Ph.D., Professor of Biochemistry and Director of the Department of Biochemistry, New York Medical College. 83 illustrations and five color plates. The C. V. Mosby Company, St. Louis, 1951. 695 pages. $7.00.

INCONTINENCE IN OLD PEOPLE—John C. Brocklehurst, M.D., Major R.A.M.C., formerly Christine Hansen Research Fellow in the University of Glasgow, E. & S. Livingstone, Ltd., 16 & 17 Teviot Place, Edinburgh, 1951. 191 pages. $6.50. (Distributed by Williams and Wilkins Co., Baltimore.)

MATERNAL NUTRITION AND CHILD HEALTH—An Interpretative Review—Kirsten Utheim Toverud, Genevieve Stearns and Icie G. Macy. Prepared for the Committee on Maternal and Child Feeding of the Food and Nutrition Board, National Research Council: Icie Macy-Hoobler, Chairman; published by the National Research Council, National Academy of Sciences, 2101 Constitution Avenue, Washington 25, D.C., 1951. 174 pages. $2.00.

OPHTHALMOLOGY—Arno E. Town, M.D., Professor of Ophthalmology, The Jefferson Medical College of Philadelphia. 208 Illustrations and 4 colored plates. Lea & Febiger, Philadelphia, 1951. 511 pages. $10.00.

MEDICAL GROUP PRACTICE IN THE UNITED STATES—A Summary of Recent Published Material and Supplementary Unpublished Data on Fees and Volume of Work—G. Halsey Hunt, M.D., and Marcus S. Goldstein, Ph.D. Federal Security Agency, Public Health Service—Division of Public Health Methods. Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 1951. 70 pages. 25 cents.

OBSTETRICAL PRACTICE—Fifth Edition—Alfred C. Beck, M.D., Professor Emeritus of Obstetrics and Gynecology, State University of New York, College of Medicine at New York City. The Williams and Wilkins Company, Baltimore, 1951. 1073 pages. $10.00.

RENAL PELVIS AND URETER—Peter A. Narath, M.D., F.I.C.S., Adjunct Professor of Urology, New York Polyclinic Medical School and Hospital. Grune and Stratton, New York, 1951. 429 pages. $12.50.

TECHNICAL METHODS FOR THE TECHNICIAN—Fourth Edition—Anson Lee Brown, B.A., M.D., President, Anson L. Brown, Incorporated. Published by the Author. Anson L. Brown, Inc., 41 S. Grant, Columbus, Ohio, 1950-51. 784 pages. $10.00.

MENTAL DISTURBANCES CITED AS FACTORS IN DEAFNESS

Mental disturbances may be a factor in deafness, according to an article in the *A.M.A. Archives of Otolaryngology*, published by the American Medical Association.

Written by Drs. Frederick Harbert and Joseph Sataloff of Philadelphia, the report described some of the less obvious forms of functional hearing loss which have been recognized and treated recently. Functional hearing loss is a nonorganic deafness in which the patient does not fully utilize his residual hearing because of psychological reasons.

Functional hearing loss has been recognized for many years in gross forms such as hysterical deafness with dimness of vision and loss of feeling and sensation, the article said. Recent studies have shown it may also occur from psychological reasons, such as frustrations, malingering caused by a personality disorder, and psychoneurosis caused by such emotional conflicts as anxiety, hypochondria or hysteria.

"Malingering is the deliberate fabrication of symptoms in whose reality the patient does not believe," the article continued. "A malingerer characteristically maintains his capacity for play and abandons his symptoms when not under observation by those whom he wants to impress by a disability. The neurotic, on the other hand, is personally convinced of the reality of his symptoms, and they interfere with his pleasures as well as his work.

"The normal person usually uses a short-lived symptom, such as a headache, as an escape mechanism and if caught shows a typical shame reaction. The person who undertakes to feign such a symptom as deafness for a protracted period is probably abnormal and should be considered to possess an inadequate personality structure. This type of person characteristically seeks an easy way of accomplishing his ends and has no qualms about adopting socially reprehensible methods to attain them."

The report cited statistics from armed forces hearing centers, where from 10 to 25 per cent of all hard of hearing patients were reported to have significant functional hearing involvement.

"It is significant that about 70 per cent of all the cases of proved functional deafness in the Army presumably had little relation to combat service," the article pointed out.

"The disruption of family life, discipline and so forth have definite emotional effects, even in noncombat service. We must bear in mind, however, that frustration, emotional conflict and insecurity, among the commonest etiological factors in producing functional symptoms, are not unique to military life and are also quite prevalent in our complex civilian society."

Although some of the forms of functional deafness are temporary due to momentary emotional status, most remain for some length of time, according to the article.

Functional deafness caused by psychological defects can be best benefited by rehabilitation of the ear in all its phases. However, functional symptoms caused by malingering and psychoneurosis are not so easily dealt with, and often require treatment by a psychiatrist, it was added.

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IMPROVED TEST FOR FUNGUS SKIN INFECTIONS REPORTED

An improved method of detecting superficial fungus infections of the skin, such as ringworm, was reported in a recent issue of the *Journal of the American Medical Association.*

Proved 17 per cent more effective than a former technique, the new method was described by Drs. Albert M. Kligman, Donald M. Pillsbury and Herbert Mescon, of the department of dermatology and syphilology of the University of Pennsylvania School of Medicine, Philadelphia.

The method consists of placing a glycerol albumin preparation over the tissue involved and scraping it with a blunt knife. The preparation causes the scraping to stick to the knife, according to the report. In some cases, a swab may be used.

The thin, soft scrapings are transferred to a slide and stained red, affording "ready detection of the fungus" under microscopic examination, the article reports. Although this method is more complicated, the article pointed out that it permits a higher percentage of positive diagnoses and takes much less time to find the fungus in a positive smear.

The old method consisted of mounting skin scrapings on a slide in a drop of 10 per cent potassium hydroxide and examining it under a microscope.

Of the 164 patients examined with suspected cases of ringworm infections of the feet and skin, 47 positive cases were disclosed by the new method, eight more than by the old, according to the report.

"If the potassium hydroxide method alone had been used in cases of ringworm of the skin and feet, about 17 per cent of the positive cases would have been missed," the article stated.

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*LUHBY, A. L., & WHEELER, W. E.: "MEGALOBLASTIC ANEMIA OF INFANCY," HEALTH CENTER JOUR., OHIO STATE UNIV., 3, 21, 1949

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These are the results of an attack on the problems of absenteeism, slowdowns and accidents which is being carried out by industrial medicine, according to articles in a recent issue of the *Journal of the American Medical Association.* Both preventive medicine and therapeutic medicine are being used to secure the nation's production requirements.

In the industrial field the biggest "headache" is the backache with its accompanying muscular pain, reported Dr. Harvey E. Billig, Jr., orthopedic surgeon, of Los Angeles. The terms "railroad spine," "gold-bricker," "neurotic," "compensationitis," "malingerer" and many others have arisen to becloud the issue, Dr. Billig added.

Chronic posture habits are a frequent cause, he reported. A telephone company experienced a huge prevalence of backaches, headaches and other complaints among its thousands of women operators seated with a forward thrust of head and neck at switchboards. Examination revealed a contracture of ligaments in several parts of the body. The complaints were eliminated by simple stretching exercises three times daily.

An airplane plant had a large absenteeism among its women workers in spite of a handsome monthly bonus given each group provided there was no off-duty among the group. During the first 10 months after instituting the stretching program on a voluntary basis, off-duty time was reduced to zero among thousands of women, Dr. Billig said.

A major oil-tool manufacturer, plagued with a prevalence of backaches and sciatica, instituted a stretching program. Lost time based on such complaints was eliminated.

In severe cases, assistance is given the patient if he is unable to do the stretching hard enough to accomplish a progressive loosening of muscles.

Psychiatry also is playing a large role in industrial medicine, according to Dr. Floyd O. Due, psychiatrist, of Oakland, Calif. Employees are inclined to bring to work the tensions of family relationship and social environment, with resultant lost hours in terms of manpower, Dr. Due said.

"It has long been accepted that absenteeism, work slowdowns and accident-proneness are influenced by such emotional tensions," he said. "The plant physician occupies a unique position between management and the worker. The position of the doctor in our culture allows for special confidence from the worker, even though the worker may consider that the doctor represents management.

"The doctor's attitude can be very influential with the worker. If the doctor is to function to the best interest of the plant his attitudes should also be influential with the management. Thus, he can arbitrate many potential grievances that might lead to emotional tensions and breakdowns."

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SUNBURN MAY BE MORE THAN SKIN DEEP, DERMATOLOGIST WARNS

Sunburn may be more than skin deep, a Pittsburgh dermatologist warned in an article in a recent issue of *Today's Health*, published by the American Medical Association.

Besides the immediate skin burn and possible infection resulting from excessive exposure to the sun, there may be consequences after a lapse of months to a year, according to Dr. Lester Hollander.

"The acute consequences of a sunburn are dwarfed when we consider some of the diseases it affects," he said, listing three.

One disease, known as xeroderma pigmentosum but a rarity, is marked by roughness and dryness of the skin. It occurs only in certain families, mostly in teen-age boys and young men, and develops at the site of freckles on the face. At first these are unduly deep-hued; later they form ulcers and the skin around them forms highly malignant cancers. Sunlight accelerates these changes.

A second, another infrequent disease, is disseminated lupus erythematosus, which affects the skin. The disease includes a residual dermatitis (at the site of a sunburn, as a rule), leukopenia, loss of supporting connective tissue in the internal organs and a gradual and persistent general weakness.

Thirdly, Dr. Hollander pointed out, there are many reports to indicate that the sun plays a provocative role in the development of skin cancer, which is found more often in people who work outdoors and under the sun, like farmers.

"The length of time spent in the sun, even if it lurks behind clouds, is responsible for the broiling of the skin and the resultant painful product, most appropriately named sunburn," he said. "Sunburn is an acute dermatitis caused by actinic rays. It may be mild or severe; it may pass inconsequentially or it may have grave results.

"Ordinarily it begins within a few hours after exposure. At first there is an inordinate amount of warmth in the affected area. This becomes intensified and a blush appears. As the color of the skin takes on deeper hues of red, three other symptoms appear: a sensation of burning, pain on motion and an exquisite tenderness that forbids even the hazard of touch.

"As the discomfort of the dermatitis mounts, the outermost layer of the skin, the epidermis, separates from its moorings and forms blisters. As the tops collapse, flakes of skin are shed, with an accompanying sensation of itching. Subsequent scratching may introduce a secondary infection. Usually the discomfort of the sunburn begins to subside in three or four days, the redness fades and in its place a gradually intensifying tan appears. No one has ever been able to point to a beneficial product of sunburn, except possibly the illusion that the appearance of tan is a sign of well-being. Tan, in fact, is simply a post-inflammatory hyperpigmentation, a fleeting, temporary insigne of an outdoor experience of no particular merit by itself."

"In moderation, exposure to sunlight associated, as it so often is, with restful relaxation and a temporary break in daily routine, is unsurpassed for recapturing spent physical reserves," he said. "Excess exposure to sunlight may be some sort of sport as yet unclassified, but it certainly is by no means a health-creating measure."

Commenting on sunburn preventives and remedies, he said:

"The best sunburn prevention is graduation of the length of exposure. This allows the pigment-processing layer of the skin to produce its own vital parasol. Emollients containing salol have some value, but this may be disputed by those who experience painful sunburns because of overreliance on them.

"In case of an actual sunburn, local applications of cool, wet boric acid dressing or nongreasy creams containing aloe vera palm leaf jell are of value. For amelioration of itching, one antihistaminic tablet every four to six hours is effective. When pain is a troublesome feature of sunburn, ask your physician for something to counteract it. That will do more good than pounds of ointment."

REPORT TWO CASES OF MEDICAL RARITY—RUPTURE OF INFANT'S STOMACH

Two cases of a rarity in medical history — the rupture of the stomach of a newborn—were reported in a recent issue of the *Journal of the American Medical Association.*

With only 20 instances to be found in medical literature, two cases were treated in the Trull Hospital, Biddeford, Me., within a space of less than three months. Surgery saved the life of one baby, but the other died.

The cases were announced by Drs. Maurice Ross, Paul Stanley Hill, Jr., and Carl M. Haas of Saco, Me., all on the staff of the hospital.

The first was a boy, born February 17, 1950, after a normal pregnancy and uncomplicated delivery. Four days later, the child's abdomen became distended so that it was "as tight as a drum." An x-ray revealed a large amount of gas in the peritoneal cavity. Puncture with a 20-gauge needle released large amounts of gas under increased pressure. Respiration improved but despite further treatment, the infant died that day. An autopsy disclosed a stomach perforation.

On May 6, 1950, twins—a boy and a girl—were born in the hospital. The boy was sluggish immediately after delivery, but soon appeared to be well. Normal findings were reported two days later. On the third day, a distended abdomen developed. An x-ray presented a picture similar to that seen in the earlier case. Surgery resulted in the release of air under pressure and revealed a rupture of the stomach wall. The child withstood the operation well and was released from the hospital on June 5. When examined on March 3, 1951, "he was in excellent health," the report said.

"The second case is of special interest because the patient had a congenital defect in the musculature of his stomach and, as a careful search of the literature has not revealed any reports of survival from this condition, he is believed to be the first one reported to have survived rupture of the stomach in the neonatal period," the doctor said.

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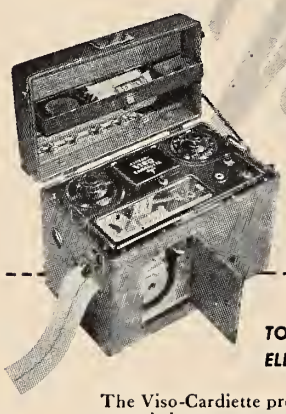

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A.M.A. REVEALS KREBIOZEN'S FAILURE AS A CANCER CURE

The Committee on Research of the Council on Pharmacy and Chemistry of the American Medical Association has reported that trial of krebiozen, the so-called cancer drug, "fails to confirm the beneficial effects" claimed last March by Dr. Andrew C. Ivy, Chicago physiologist and vice-president in charge of the professional schools of the University of Illinois.

The committee's long-awaited report was made after a thorough investigation of the drug, which is said to be extracted from horse serum after the horses have been inoculated with an undisclosed substance. The drug, described as a white powder soluble in water, is alleged to have been discovered about three years ago by Dr. Stevan Durovic, former Yugoslavian physician, who is now living with his brother, Marko, an attorney, in Kenilworth, a Chicago suburb. Dr. Durovic came to this country from Argentina.

The Committee on Research of the A.M.A. council is composed of 10 outstanding research men, all physicians, and it was aided in the investigation by a subcommittee of four Chicago cancer specialists —Dr. Dwight E. Clark, professor of surgery, University of Chicago; Dr. Peter A. Nelson, assistant clinical professor of surgery, Stritch School of Medicine, Loyola University; Dr. P. Shubik, cancer coordinator, Chicago Medical School, and Dr. James P. Simonds, professor emeritus of pathology, Northwestern University. This subcommittee reviewed all the accumulated data.

The Committee on Research summarized the lengthy 42-page report in these conclusions:

"1. Case histories of 100 patients with cancer treated with a secret remedy, krebiozen, were obtained from seven independent sources. These histories were carefully reviewed by a subcommittee.

"2. Ninety-eight patients were reported as failing to show objective evidence of improvement.

"3. Two patients showed some evidence of temporary improvement coincident with krebiozen therapy. In one patient, this was apparently fortuitous; in the other, the major lesions showed continued rapid progression.

"4. Forty-four of the 100 patients treated have expired up to the time of the writing of this report.

"5. Krebiozen failed to show any discernible histologic effect upon the tumor in the group of patients from whom serial biopsies or autopsy specimens were obtained.

"6. These findings fail to confirm the beneficial effects reported by Dr. Ivy and his associates."

The committee's document stressed the fact that the American Medical Association was making the report as a public service.

"Ordinarily the Committee on Research, as a component part of the A.M.A. Council on Pharmacy and Chemistry," the report said, "would not attempt to evaluate the clinical benefits, if any, of a substance whose character and method of manufacture were not known and standardization of which was so loosely defined. However, the importunities of phy-

(Continued on Page 18)

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A.M.A. REVEALS KREBIOZEN'S FAILURE AS A CANCER CURE

(Continued from Page 14)

sicians for authentic information and the tremendous worldwide interest created a moral obligation to the profession and to the laity which transcended the issue of medical ethics ordinarily applicable to secret remedies."

The A.M.A. investigation was started a short time after Dr. Ivy told 100 physicians and research workers at the Drake Hotel in Chicago, March 26, 1951, of the success he and his associates had in using the drug on 22 Chicago cancer patients in 18 months' time.

"The logical first step in the investigation," the A.M.A. report said, "was to ascertain whether krebiozen was actually a secret remedy. . . . Therefore, a visit was made to the Chicago office of the Krebiozen Research Foundation by Oliver Field, director of the A. M. A. Bureau of Investigation; Dr. Josiah J. Moore, pathologist, and A.M.A. treasurer, and Dr. Paul Wermer, secretary of the Committee on Research, accompanied by a physician of Yugoslavian ancestry who acted as an interpreter to insure complete understanding during the interview. Dr. Stevan Durovic and his brother, Marko, proved most cooperative in discussing all phases of krebiozen investigation and showed the group many letters of testimonial from practitioners.

(Continued on Page 22)

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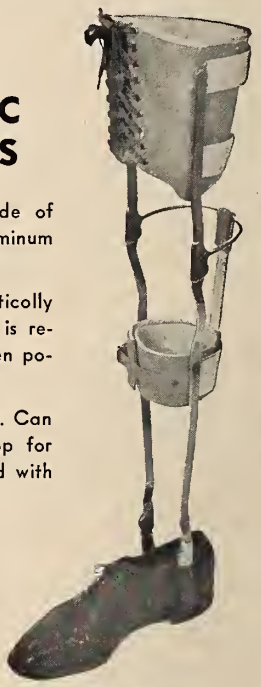

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1. Hock, C. W.: J. Med. Assn. Ga. 40:22, 1951. 2. Hufford, A. R.: J. Mich. St. Med. Soc. 49:1308, 1950. 3. Chamberlin, D. T.: Gastroenterology 17:224, 19

A.M.A. REVEALS KREBIOZEN'S FAILURE AS A CANCER CURE

(Continued from Page 18)

"However, when queried as to the exact biologic or chemical nature of krebiozen, Dr. Durovic referred to the vague original statements made at the announcement [in the Drake Hotel]. Dr. Durovic refused to amplify this statement in any way, stating that the product might be patented at some future date, that he was afraid that the patent might be violated in some South American country, and that the secret might leak behind the 'Iron Curtain.'

"In subsequent interviews with some of the participants in the study, it was disclosed that none of them had ever seen krebiozen in any other form but in solution. In the brochure [given to those at the Drake Hotel meeting], it was reported that krebiozen favorably altered tumors occurring spontaneously in cats and dogs. It was disclosed later that these animal studies had been done in Argentina and that the slides alone had been reviewed in this country. All animal studies performed in the United States on tumors occurring spontaneously or induced chemically in mice and rats had shown negative results with krebiozen."

The report said that from the evidence obtained, the drug "actually is a secret remedy whose nature and preparation are known only to Dr. Durovic and, presumably, his brother, Marko."

(Continued on Page 26)

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A.M.A. REVEALS KREBIOZEN'S FAILURE AS A CANCER CURE

(Continued from Page 22)

The A.M.A. report said further that the next step of the investigation was the time-consuming job of securing information on the effects of krebiozen on patients.

"Therefore," the report said, "only clinicians with wide experience in the natural history, course and therapy of cancer were requested to submit abstracts of their experience with the drug to the Committee on Research. Reports have been received from seven sources located in four widely separate regions of the country (including the Tumor Clinic, Department of Surgery, University of Illinois). In each instance, the directions for use of the drug, as furnished by the original investigators, had been meticulously followed. . . .

"In order to insure that case reports would be evaluated adequately, a committee, experienced in the course and long-term care of cancer, composed of faculty members of the medical schools located in Chicago (exclusive of the University of Illinois), served as a review board."

The investigation covered 100 unselected patients suffering from cancer and treated with krebiozen.

"Not one of the patients observed," the report said, "has shown any appreciable alteration in the

(Continued on Page 32)

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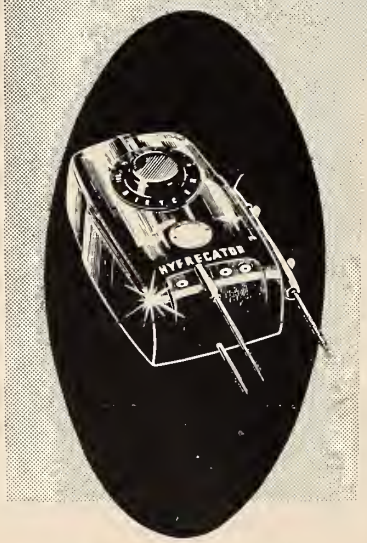

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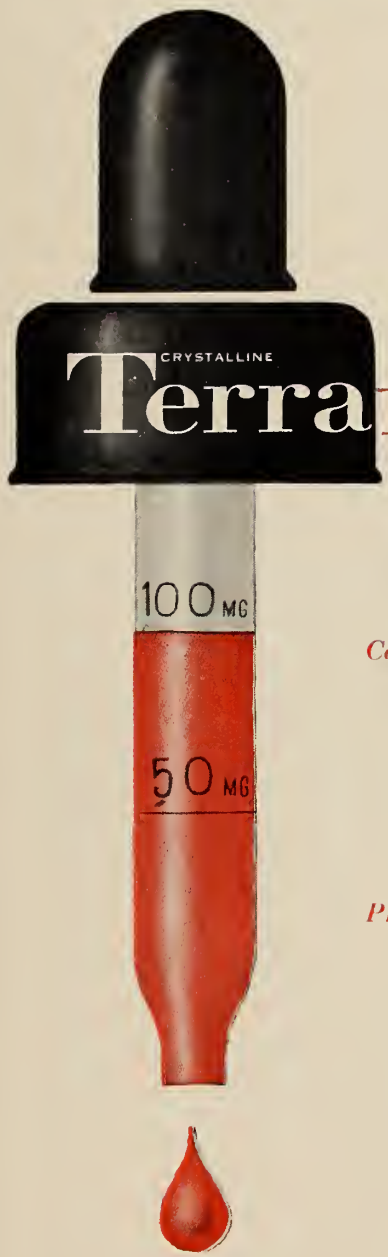

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A.M.A. REVEALS KREBIOZEN'S FAILURE AS A CANCER CURE

(Continued from Page 26)

course of the primary tumor growth, although two patients showed equivocal, temporary response. One of these patients had shown a similar pattern of remission and exacerbation prior to the treatment, and later therapy with krebiozen failed to show favorable influence. The second patient showed regression of subcutaneous nodules, disappearance of right hilar density and great subjective improvement, but his osseous tumors continued to show rapid progression. . . ."

OLD-FASHIONED STOMACH-ACHE MAY BE FORM OF EPILEPSY

When Junior complains of a stomach-ache, it may not be the result of eating the well-known "green apple." Instead, it may be a form of epilepsy, according to a report in a recent issue of the *Journal of the American Medical Association.*

A study of 31 children suffering from recurring, knife-like pains in the center of the abdomen over a period of years was presented by Drs. Paul F. A. Hoefer, Sidney M. Cohen and David McL. Greeley, of New York City.

Electroencephalographic (brain wave) studies of

(Continued on Page 33)

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OLD-FASHIONED STOMACH-ACHE MAY BE FORM OF EPILEPSY

(Continued from Page 32)

the children showed definite abnormalities in 30 of them and a "borderline normal" record in one, the report disclosed.

"An over-all incidence of abnormal electroencephalogram activity, both specific and nonspecific of almost 97 per cent, as found in our patients, must be considered positive evidence of the cerebral and presumably paroxysmal origin of this particular disease entity," the report stated. "The figure compares well with those obtained in highly selected groups of established epileptics in our own and other laboratories."

Candid epileptic manifestations occurred in nine of the group, the survey disclosed. Four patients had attacks preceding the onset of the abdominal pain. All four still experience epileptic seizures; only one no longer has abdominal pains. Five other patients began having epileptic seizures several years after the onset of the abdominal pains.

According to the report, the abdominal pains lasted a few minutes to several hours. Some of the pains were accompanied by nausea, vomiting, diarrhea, constipation, headache, fever, drooling, sweating, or brief periods of unconsciousness. Sixteen of the children fell asleep after an attack of abdominal pain "no matter what time it occurred and slept for several hours even in the middle of the day."

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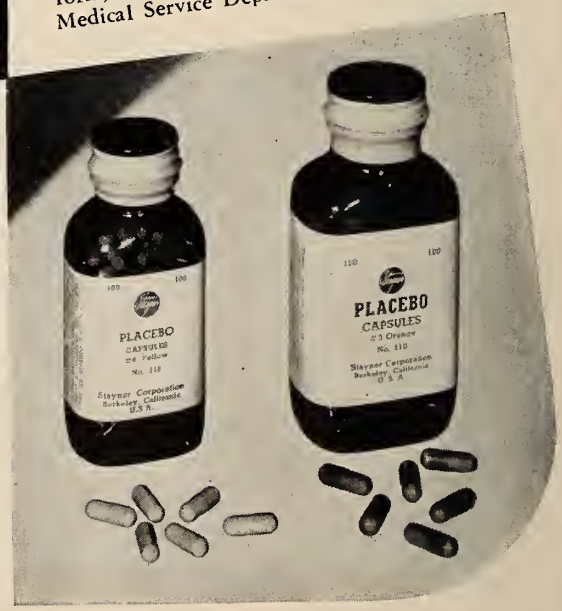

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ANOTHER ANTIBIOTIC PROMISING IN TREATMENT OF HEART CONDITION

Bacitracin, an antibiotic, has been added to the list of drugs which hold promise in the treatment of staphylococcic endocarditis, a heart condition caused by bacterial infection. The disease, if not brought under control, usually runs a complete and fatal course within four weeks.

A report of the use of bacitracin, in conjunction with other antibiotics, with an effective result was made in a recent issue of the *Journal of the American Medical Association.* The authors of the article, Drs. Charles F. Friedberg and Mortimer E. Bader, of Mount Sinai Hospital, New York City, stressed that while the course of the disease in their one case was not stopped by the use of penicillin, aureomycin and chloramphenicol, it was impossible to say to what extent recovery was due to bacitracin because the use of the other antibiotics was continued.

However, they expressed the opinion that this was the first instance "in which recovery from this disease may be credited largely, if not entirely, to the use of bacitracin."

"The cure in the case presented here merits particular attention because the clinical manifestations were extremely severe and control of the infection had not been attained despite two weeks of treatment with massive doses of penicillin, aureomycin, and chloramphenicol," the report stated.

The case described in the report involved a 28-year-old man who entered the hospital acutely ill, despite two weeks of treatment with antibiotics. During the first four days he was in the hospital, the patient received additional large doses of antibiotics, but his condition failed to show any marked improvement, according to the report.

On the fifth day, the article stated, the patient was given intramuscular injections of bacitracin in addition to penicillin and aureomycin. Laboratory tests indicated that it might be more effective, and, because of the gravity of the case, it was decided to use the drug despite reports of adverse effects on the kidneys in some instances.

Immediate improvement was noted with no after-effects from the bacitracin. After a week, the dosage was reduced and a week later discontinued. Penicillin was maintained.

The patient was discharged after 56 days of hospitalization, and a check five months later showed him to be in good health.

Because of the use of the other antibiotics, the report pointed out, it is difficult to determine accurately the relative importance of bacitracin in effecting the recovery. Whether the penicillin-aureomycin or the bacitracin treatment alone would have effected a cure is uncertain, it was added.

"With respect to staphylococcic infections in general and staphylococcic endocarditis in particular, the availability of bacitracin as an effective antibiotic is especially timely," the report declared.

"An increasing number of reports indicate that more and more strains of staphylococci are becoming resistant to penicillin, hitherto the preferred antibiotic against staphylococci." There has also been noted a resistance to aureomycin, used after penicillin has failed, the report stated.

PROTEIN DEFICIENCY FOUND PREVALENT IN CHILDREN

Dogs, cats, and farm animals are sometimes unintentionally fed better than many children. As a result, many youngsters suffer from hypoproteinosis, a deficiency disease caused by insufficient proteins in the daily diet, according to a recent issue of the *Journal of the American Medical Association.*

Parents must learn "that it is not how much the child eats but what he eats that is essential to his nutritional well-being," according to the authors of the article, Drs. Harold D. Lynch and William D. Snively, Jr., of Evansville, Ind.

A child should not be permitted to consume large quantities of any one food, including milk, whenever he so desires, the doctors said. Rather, he should be allowed to become hungry enough to consume a balanced diet at mealtime.

"Typically (in hypoproteinosis), there is a history that the child is a good milk drinker but that 'he does not eat' at mealtime. It is usually admitted somewhat reluctantly that the child does eat as he pleases between meals, usually such foods as 'cookies, crackers, soft drinks and candy,' all highly refined carbohydrate foods," they stated.

"Animals could not survive a diet of the highly refined carbohydrate food permitted children. Parents are appalled to learn that their dogs and cats and farm animals are given better diets than their children."

Hypoproteinosis may result in loss of appetite, failure to gain weight, vomiting, constipation, increased susceptibility to infections, dental caries, anemia and irritability.

"The basic reason (for hypoproteinosis)," the doctors said, "is a general lack of understanding by parents of the fundamentals of nutrition. There is a tendency to overemphasize certain articles of diet, particularly milk because of its calcium content. Vitamins also have been made to loom importantly in the lay mind."

The doctors pointed out that even a quart of milk a day will not provide sufficient protein for adequate growth and development, and added: "The consumption of this much milk at certain ages is likely to spoil the child's appetite for the solid foods, such as meat, eggs and cheese, that make a much greater protein contribution in proportion to their bulk."

Psychological factors are also prominent in the causes of cases of hypoproteinosis, the report added. Mothers are determined to see that their children get what they believe are the proper quantities of the right foods. This is often in conflict with the child's growth needs.

"The treatment of hypoproteinosis is sometimes not simply that of prescribing a diet adequate in protein. When hypoproteinosis is due to improper parental attitudes and feeding techniques, education is required."

Parents must learn the proper foods children require at each meal, it was stated. Each meal should contain sufficient quantities of such protein foods as meat, eggs or cheese. Children should not be forced to eat. A pleasant atmosphere at mealtime should prevail.

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TREAT HUMAN BITE INFECTIONS SUCCESSFULLY WITH BACITRACIN

The successful use of bacitracin, one of the antibiotics, in the treatment of infections resulting from human bites was reported in a recent issue of the *Journal of the American Medical Association.*

Infections from such bites are caused by bacteria both in the mouth of the biter and on the skin of the recipient of the bite, according to the authors of the article, Drs. Irving A. Levin and Alfred B. Longacre, of the Louisiana State University School of Medicine, New Orleans.

Because the external characteristics of human bites are so misleading that patients frequently neglect them until inflammation has occurred, serious infections and crippling effects often result, the doctors wrote. The most frequent human bites occur on the back of the hand and are incurred when the closed fist strikes the teeth of an opponent in a fight.

The doctors' report covered 27 persons suffering from infections resulting from human bites. Eleven bites were on the back of the hand, eight on the fingers, one on the palm of the hand, and the others on various parts of the body.

In 23 cases, penicillin, streptomycin and sulfadiazine were used, either alone or in combination. In four cases, bacitracin was used solely. All 27 cases were successfully treated.

However, the doctors pointed out:

"Since the usual course of infection resulting from human bites is so bad without antibacterial therapy, the dramatic results obtained in these four cases suggest that bacitracin played a significant, if not major, role in the successful outcome.

"The excellent therapeutic results obtained in the four cases reported in this paper suggest that bacitracin should be the antibiotic of choice in the treatment of infections resulting from human bites."

However, the report stressed that in human bite cases which are not severe, penicillin, which has also been demonstrated to be very effective in controlling these types of infections, should be used.

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Diagnosis of Pulmonary Coccidioidal Infections

CHARLES E. SMITH, M.D., *Berkeley*

SUMMARY

A wide variety of pulmonary lesions may be caused by coccidioidomycosis. Suspicion of coccidioidomycosis may be substantiated by careful clinical-epidemiological histories. The first laboratory procedure should be a coccidioidin skin test. If the reaction to the test is positive, serological tests are next. Also, if there is no reaction to coccidioidin, serological tests are still indicated if dissemination is suspected. The more severe the infection, the greater the probability of establishing a diagnosis serologically. In only three-fifths of patients with coccidioidal cavities can the diagnosis be fixed serologically. In such patients if differential skin tests are not conclusive, attempt should be made to recover the fungus. However, this is accompanied by great risk of laboratory infection. Eosinophilia and accelerated erythrocyte sedimentation are only circumstantial items of evidence, as is the appearance of the pulmonary roentgenogram.

COCCIDIOIDOMYCOSIS enters the differential diagnosis whether a pulmonary lesion is discovered during the course of clinical illness or as the consequence of routine or mass x-ray surveys. In either event clinical and epidemiological histories are the first steps in ariving at the diagnosis.

From the Commission on Acute Respiratory Diseases, Armed Forces Epidemiological Board and the School of Public Health, University of California.

Professor of Public Health and Dean, University of California School of Public Health.

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CLINICAL SPECTRUM

Approximately 40 per cent of naturally-acquired human coccidioidal infections are accompanied by symptoms.[27] Most common are pleurisy, fever, malaise, cough, anorexia, backache, and night sweats. Not infrequently toxic erythema also develops. The patient may be prostrated or he may have only transient malaise. The pleural pain may be so severe as to be mistaken for that of coronary occlusion, nephrolithiasis, cholecystitis or fractured rib, or it may be so mild as to be only a sensation of oppression or tightness in the chest. In some instances the headache of coccidioidomycosis has been attributed to brain tumor or poliomyelitis. The toxic erythema has been confused with measles or scarlet fever. Five per cent of infections in males and as high as 25 per cent[27] of infections in females are accompanied by erythema nodosum or erythema multiforme, often associated with arthralgia. The arthralgia has caused confusion with rheumatic fever. Coccidioidal erythema nodosum must be distinguished from other sensitizing causes such as primary tuberculosis, streptococcosis or drug reactions. However, it is a useful sentinel which even can be used as an index for estimating incidence of coccidioidal infections. The erythema multiforme, which occurs especially on the upper extremities, thorax and face, is more apt to cause confusion and on several occasions has led to a diagnosis of smallpox. Pleural effusion, which is occasionally "silent," is generally associated with the initial infection although where a peripherally-located coccidioidal cavity breaks into the pleural space, hydropneumothorax develops secondary to the bronchopleural fistula.[31] This complication gen-

erally occurs months or years after the initial infection.

While coccidioidal dissemination usually occurs within a few months of the primary infection, a pulmonary lesion may not have been present or frequently has regressed so that the pulmonary roentgenogram is within normal limits when dissemination is diagnosed. It is noteworthy that dissemination occurs most frequently in dark-skinned males, in at least 1 in 100 infections of Negro males as compared with 1 in 400 of white males.[27] Dissemination is least frequent in white females except, as Vaughan suggested,[37] when infection is acquired during the last trimester of pregnancy.

Those are the highlights of the clinical spectrum of primary infection and the epidemiological aspects of disseminated coccidioidomycosis which provide for an index of suspicion.

An additional word should be said with respect to clinical history for coccidioidal pulmonary cavitation. As Winn[40] pointed out, most cavitations are "cyst-like" and silent. Hemoptysis frequently is associated with the condition, but rarely are the lesions progressive nor is the patient comparable to a person with either tuberculous cavitation or disseminating coccidioidomycosis.[31] Similarly, if a pulmonary lesion is proved to be a coccidioidal residual, the physician and patient can both relax. The difficulty is the exclusion of other diagnoses, especially tumor, since asymptomatic lesions detected by mass surveys usually cannot be proved to be coccidioidal unless they are found at a site previously known to have been involved in coccidioidal pneumonitis.

RESIDENCE HISTORY

While the clinical history mainly serves to alert the physician to the possibility that a pulmonary lesion is coccidioidal, a careful residence history frequently provides extremely significant evidence. Of course, persons residing in known endemic areas always are suspect, and for those living outside such areas a history of transient exposure as in touring by automobile or train is a very valuable clue. The author has records of three persons who were infected merely as tourists on trains and of 13 others who were exposed only in riding through an endemic area by automobile or bus. With the knowledge that the incubation period is seven to 28 days, generally 10 to 16 days, it is often possible to fix the time of coccidioidal infection quite firmly by careful interrogation. Of course, the more exotic exposures to dusty products, even human fomites, must not be overlooked and rare cases are encountered in which no residence exposure can be traced. Especially should one be on the lookout for the laboratory-acquired infection.[20, 34] It is axiomatic that unless the most extraordinary facilities are available, whenever Coccidioides is handled on solid media not only the laboratory technician wielding the loop but also those in the environment may become infected. However, as the endemic area is not often thus brought to the patient, it is well to be familiar with the known geographical distribution of Coccidioides.

Several reviews[1, 22, 23, 29] have indicated the endemic areas. Outside North America, Coccidioides has long been recognized in Argentina. Recently Venezuela[3] and the Paraguayan Chaco[9] have been added. While cases have been attributed to Italy, the Balkans and Hawaii, none have been consistently reported from those areas. Those odd cases reported from China and Canada are erroneous. Certainly, the northern states of Mexico are endemic areas. Within the United States of America (Figure 1) beginning at Mission, Texas, the entire Rio Grande Valley westward is involved. The area extends northward spottily around San Antonio but certainly surrounds San Angelo. It stops south of Wichita Falls. The area extends westerly past El Paso into New Mexico. The southern part of New Mexico is involved, but Albuquerque, Santa Fe and all northern New Mexico are spared. Southern and Central Arizona are highly endemic, including both Tucson and Phoenix. At Florence 50 per cent of susceptibles are infected within six months. Northern Arizona is nonendemic, but the regions around St. George in Utah and Las Vegas in Nevada seem to be mildly endemic.

ENDEMIC AREAS IN CALIFORNIA

In California the most famous area is the San Joaquin Valley. In its southern reaches, 25 per cent of susceptibles may be infected annually.[28] The endemicity, as gauged by the incidence of the disease, diminishes from there northward. Near Hanford the incidence is one-half the Bakersfield rate. While as far north as Chowchilla there is a considerable incidence, Merced, only 20 miles farther north on Highway 99, has very few cases. Along the eastern side of the valley the incidence is very spotty in Merced and Stanislaus counties. However, along the west side it extends through Vernalis nearly to Tracy. One or two isolated cases have been noted in Yolo and Contra Costa counties, but there is no really proven endemicity in the Sacramento Valley. The area does extend over the Coast Range into San Benito, Monterey and San Luis Obispo counties. The region around San Miguel (Camp Roberts[24]) and Paso Robles is endemic but the city of San Luis Obispo is not. The westerly portions of Santa Barbara and Ventura counties (to Fillmore) are endemic, as is the northern part of Los Angeles county, apparently including at least the upper portion of the San Fernando Valley. There is spotty endemicity[38] in Riverside and San Bernardino counties as well as San Diego County.[29] More than a year ago Kessel reported on the endemicity of Southern California,[18] and additional delimitation of the area will be important. However, this sketch should recall the clues arising from geographical association. Epidemiological assistance also can come from data with respect to seasonal exposure to the dusty summer and fall or to dust storms. It should be borne in mind, moreover, that even soon after a winter rainstorm, dust frequently blows. Thus, some infections also occur during the rainy season.[25, 28]

Figure 1.—Known coccidioidal endemic areas in the United States of America. (Permission to reproduce outline map by University of Chicago Press.)

ESSENTIAL LABORATORY PROOF

While clinical and epidemiological histories may arouse suspicion and provide supporting evidence, proof that a pulmonary lesion is coccidioidal depends upon laboratory evidence.

Coccidioidin Skin Test

The first procedure should be the coccidioidin skin test. The history of the development of the coccidioidin test has been given in detail.[30] Suffice it to say that Cummings,[6] Davis,[7] Hirsch, Benson and D'Andrea,[10-11] Jacobsen,[13] Beck,[2] Eddie,[12] Kessel[16] and Stewart[35] are some of those to whom great credit is due for developing this very useful test. Now available commercially,* coccidioidin is generally used in 1:100 dilution of a Berkefeld filtrate of multiple cultures of Coccidioides grown on asparagine synthetic medium.

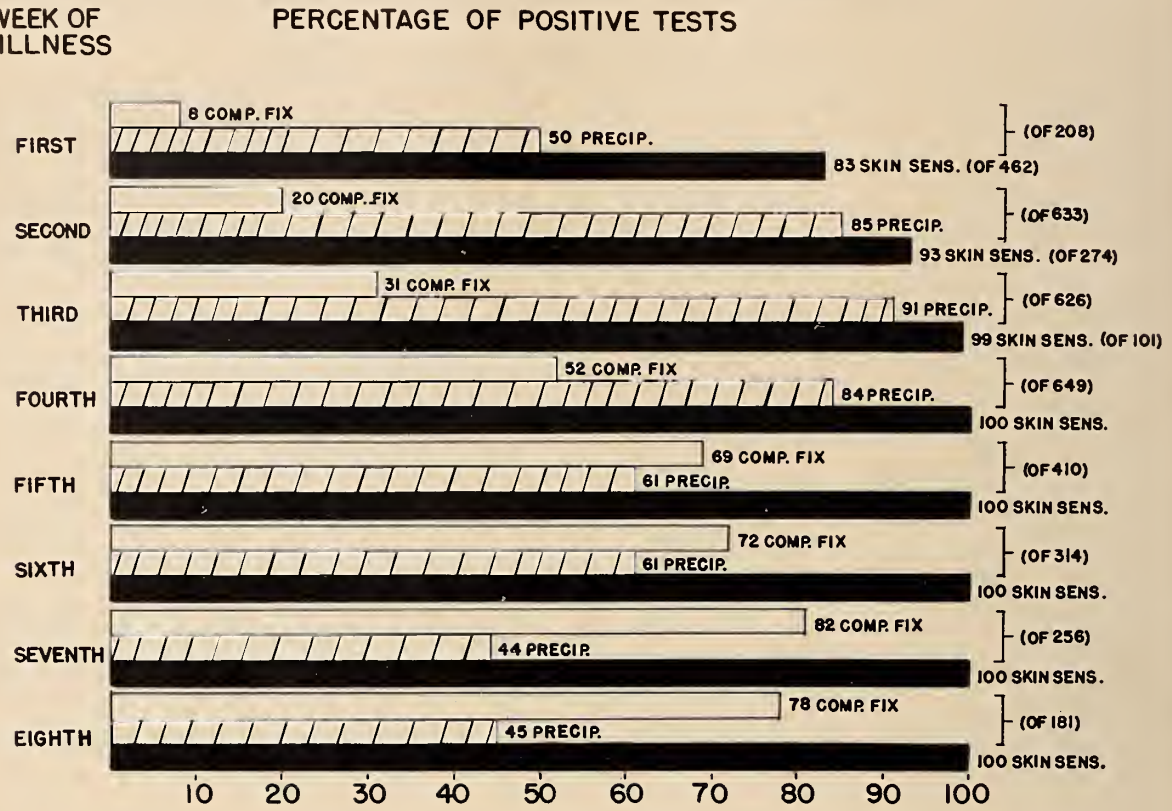
It does not activate old, quiescent infection, nor is the currently provided material antigenic.[30] Therefore, unlike brucellergin, it does not sensitize. Neither does coccidioidin evoke humoral antibodies and interfere with coccidioidal serological tests. While a severe reaction may cause local discomfort and occasionally evoke fever and malaise, there is no focal reaction. The only significant systemic complication which may occur is exacerbation or precipitation of erythema nodosum or erythema multiforme in association with a primary infection.

The result of an intradermal coccidioidin test should be observed at 24 and 48 hours. Induration greater than 5 mm. in diameter should be considered a positive reaction. As the active principle of coccidioidin is mainly carbohydrate, it is quite stable, which probably also accounts for its lack of antigenicity. Kept refrigerated and uncontaminated, even in 1:100 dilution it remains potent at least two years. Care must be taken not to use syringes which have contained other biologic materials unless the equipment is soaked overnight or boiled in dichromate cleaning solution.

The significance of the results of the coccidioidin test are comparable to those of the tuberculin test. The test is diagnostic only when an initial negative result early in infection is followed by a positive reaction upon repeat of the test later — so-called "conversion." In one-sixth of uncomplicated primary infections, 1:100 coccidioidin evokes no reaction during the first week of infection (Chart 1); but unless there is dissemination, there is invariably positive reaction by the fourth week. Thus "conversion" may be diagnostic. Moreover, in endemic areas if tests are repeated every six months, the test provides the most sensitive index of infection.[27, 28] Generally, it can only serve as a screen. However, if the subject tested has merely traveled through or resided a short time in an endemic area, logically a positive reaction can be considered very significant. Moreover, when erythema nodosum is suspected to

* The Cutter Laboratories, Berkeley, Calif.

Chart 1.—Percentage distribution of positive precipitin and complement-fixation tests in sera and 1:100 coccidioidin tests in skin of patients with primary non-disseminating coccidioidomycosis (by weeks of illness).



be coccidioidal, a negative result eliminates that diagnosis since the skin lesions are themselves manifestations of hypersensitivity.[25]

Skin tests may differentiate between tuberculous and coccidioidal pulmonary lesions. Not infrequently pulmonary cavities or residuals have been established as coccidioidal when the result of a tuberculin test proved negative.

However, when a patient's infection is disseminated or an extrapulmonary lesion already has developed, there may be no reaction even to undiluted coccidioidin.[31] Moreover, there is association between sensitivity and favorable prognosis of disseminated infection, between anergy and poor outlook.

Dermal sensitivity generally persists for many years. However, sometimes it wanes and occasionally persons with coccidioidal cavities may have no reaction to coccidioidin more dilute than 1:10, and very rarely may not react to material even in that concentration.[30] That this is not the result of failure of antigenic "coverage" has been noted in several instances, when results of skin tests were negative but coccidioidin from the same strains fixed complement in the sera of the same patients. Coccidioidin in concentration of 1:10 or more must be used cautiously, for non-specific reactions may occur.[32] Coccidioidin does not cross-react with bacterial, viral or rickettsial infections; occasionally there have been cross-reactions noted with other mycotic antigens, notably haplosporangin, histoplasmin and blastomycin.[8, 26, 29, 32] Histoplasmin is more apt to cross-react in coccidioidal infections than coccidioidin in those dominantly sensitive to histoplasmin. However, when the antigens are used in balance, there is rarely difficulty in ascertaining which infection is dominant.[17, 18, 19, 32] Moreover, history of residence in the Mississippi Valley or the tropics can usually aid in fixing dominant histoplasmin sensitivity.

Serological Tests

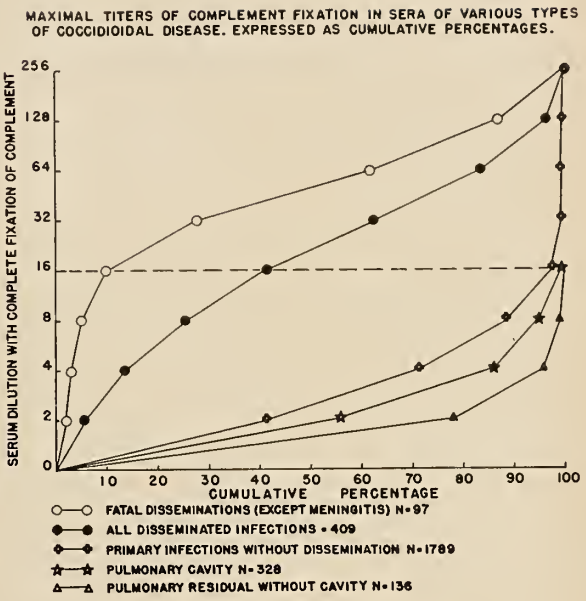
If coccidioidin sensitivity has been demonstrated, or if the test result is negative but the patient is suspected to be undergoing coccidioidal dissemination or has a very thin-walled, "nonreactive" cavity and an accusative residence history, serological tests come next.[33] If a patient is merely undergoing a respiratory illness suspected to be coccidioidal, serological tests should be deferred until "conversion" of the coccidioidin test to positive takes place. The diagnostic humoral antibodies develop more slowly than dermal sensitivity (Chart 1). Thus, while only one-sixth of the patients with uncomplicated primary infections have no reaction to 1:100 coccidioidin in the first week of the disease, fully one-half of those who ultimately will become serologically positive do not have precipitins and nine-tenths do not have complement-fixing antibodies so early. If

the skin test reaction becomes positive, serological tests may be requested. If combined precipitin and complement fixation tests are done repeatedly in patients with coccidioidal disease so severe as to require hospitalization, the results will be diagnostic in over nine-tenths of cases. If dissemination occurs, the reaction to these tests is positive in over 99 per cent of cases. The tests are diagnostic in approximately three-fifths of cases in which there is coccidioidal cavitation. They are seldom positive in patients with asymptomatic pulmonary residuals, but qualify as appropriate "long shots."

The methods of carrying out these serological tests and interpreting them have been described in detail.[33] In precipitin tests, made with a constant quantity of serum and increasing dilutions of appropriate antigen, the results are indicated by buttons which develop over a period of five days. In a series of over 3,200 positive serological tests in patients with non-disseminating primary infection, precipitins alone were positive in 44 per cent. Thus, the test is important where the acute phase of infection is suspected. It must be reiterated that serological tests should be withheld until the skin tests convert. The precipitin antibodies begin reverting in the third week of the disease and seldom persist longer than four months. The complement fixation test is done with serial dilutions of serum as in any quantitative Kolmer test.[17, 33] Positive reaction may continue into the third month (Chart 1) but in some cases reversion begins in the second month. Complement fixation may persist for several years, even with uncomplicated infections. When dissemination has occurred, even after recovery it may continue indefinitely. However, even when there is a residual pulmonary lesion or cavity formation, after several years the results of serologic tests are frequently entirely negative or equivocal. Thus when an acute, pneumonic-type illness is suspected as coccidioidal, both precipitin and complement fixation tests are appropriate. With more long-standing infections, especially for the diagnosis of old asymptomatic pulmonary residuals or cavities, only complement fixation tests need be done.

The titer of complement fixation correlates with the severity of the coccidioidal infection (Chart 2). Thus two-fifths of nearly 1,800 patients with uncomplicated primary infections whose sera fixed complement had titers no higher than the first dilution (1:2) while only one-fortieth had titers exceeding 1:16. Over half of 328 patients with coccidioidal cavities whose sera fixed complement had a titer of only 1:2 while only one in a hundred exceeded 1:16. In contrast three-fifths of over 400 patients with disseminating infections had titer over 1:16 and nine-tenths of approximately 100 patients with extensive, fatal disseminating infections exceeded that level. Negative results of serologic tests do not eliminate Coccidioides as the cause of a residual pulmonary lesion with or without cavitation. However, progressive coccidioidal pulmonary disease can usually be excluded if results are negative. The author has records of many cases of patients with primary or

Chart 2



metastatic pulmonary malignant disease or with tuberculosis in which suspicion of coccidioidomycosis could be eliminated because of negative results of serologic tests. Of course, diseases may coexist, so positive reaction to tests for coccidioidal infection does not necessarily eliminate concomitant tuberculosis or cancer from consideration. However, serial tests have given clues. When pulmonary lesions increase depite stable or falling serological titers, an additional non-coccidioidal cause is virtually certain.

Commercial provision, in the near future, of antigens for precipitin and complement fixation tests and the positive control serum requisite for the latter is probable.

Culture; Isolation of Coccidioides

Demonstration of Coccidioides is irrefutable proof of coccidioidal infection. Even during the acute primary infection a patient may not raise sputum. Unfortunately, with asymptomatic coccidioidal pulmonary residuals, results of sputum and gastric cultures are characteristically negative. The most damning objection to sputum cultures is the hazard of laboratory infections.[34] As was mentioned previously, handling of cultures on solid media almost inevitably results in laboratory infections. Coverslip examinations of sputum are safe but notoriously uncertain. The "spherules" (sporangia) with endospores may be missed or artifacts may be "identified" as Coccidioides. Culture on malt, Sabouraud's agar, or differential media[26] with inoculation of material from suspicious cultures intraperitoneally into white mice or intraperitoneally or intratesticularly into guinea pigs is necessary to complete identification as Coccidioides.

It must be admitted that in certain instances there is no substitute for culturing. For instance, in pa-

tients with pulmonary cavitation when results of both tuberculin and coccidioidin tests are positive and of serologic tests negative or equivocal, only recovery of the etiological agent will establish the diagnosis. In such circumstances the best procedure is to make cultures and, if suspicious growth occurs, to send the specimen to a place where subcultures can be made with safety.

Hematological Studies

Of accessory aid in the evaluation of pulmonary lesions are counts of leukocytes in the blood and determination of the erythrocyte sedimentation rate. During the acute illness eosinophilia can rise as high as 89 per cent.[39] Polymorphonuclear leukocytosis in the region of 10,000 to 14,000 with a high proportion of banded forms is frequent early in the illness, and this phenomenon is usually succeeded by lymphocytosis. In patients with coccidioidal cavities or pulmonary residuals the leukocyte count is normal.

The sedimentation rate usually is accelerated during "active" infection. Slowing of the rate is an index of recovery. A normal sedimentation rate in nearly three-fourths of 150 cases of coccidioidal cavitation has been reported[31]—further evidence that in most of such cases the infection is quiescent.

ROENTGENOGRAMS

Roentgenographic evidence may cause suspicion of a coccidioidal pulmonary lesion. Extensive descriptions[4, 5, 14, 15, 21, 31, 36, 40] of the various coccidioidal lesions in the lungs have been presented. However, roentgenograms can never establish the diagnosis. Radiologists with long experience may be correct nine times out of ten, and with thin-walled coccidioidal cavities may score even higher. However, as with a well-nigh indicting residence history, the diagnosis still depends upon other laboratory means.

School of Public Health, University of California, Berkeley 4.

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Some Recent Advances in Thoracic Surgery

HERBERT C. MAIER, M.D., *New York, N. Y.*

SUMMARY

In this brief presentation of some recent advances in thoracic surgery a number of miscellaneous topics which deserve consideration at this time are discussed. Among these are acidosis during anesthesia for thoracic operations, the problem of esophagitis in relation to surgery, recent improvements and reorientations in pulmonary operations, and some comments on operations upon the heart and great vessels.

IN a consideration of recent advances in thoracic surgery the great contributions of allied fields which have made these achievements possible immediately come to mind. The development of anesthesiology has permitted long and detailed transpleural operations. Antibiotics have radically changed the indications, the timing of operative intervention, and the postoperative morbidity. Adequate blood replacement and improved preparation and postoperative care have played an important role. Fundamental advances in physiologic knowledge have been made.

It is well known that some so-called advances of yesteryear have, with further observation, been shown to have their less favorable aspects. Especially when a surgical procedure entails an alteration in normal anatomical relationships or a disturbance of physiologic mechanisms, one may fail to foresee some late undesirable consequences. Therefore some of the topics to be mentioned briefly here are concerned with such problems which require attention at present.

ANESTHESIOLOGY

It is amazing that it has taken so long to recognize the vast importance of well conducted anesthesia in surgery. Probably relatively few physicians even today are fully aware of the many ways in which minor disturbances in respiration, circulation, and metabolism during anesthesia can influence morbidity and mortality. The secondary effects of abnormal ventilation or altered cardiocirculatory function are not limited to the first day or two after operation but may set the stage for other later complications.

One of the notable advances in anesthesiology in recent years has been in lessening the risk of hypoxia. But with the anesthetist's achievement of a quiet operative field for prolonged and meticulous intrathoracic operations, another problem has assumed greater importance — the carbon dioxide accumulation with resultant severe respiratory acidosis which is now known to be a common and undesirable occurrence. Pronounced retention of carbon dioxide in the anesthetized patient may cause little or no hyperventilation and usually does not produce transient hypertension as has been taught. Respiratory acidosis may be unrecognizable clinically but demonstrable by blood studies. The great importance of such respiratory acidosis lies in the fact that it increases the vulnerability of the patient to drugs and hemorrhage. The incidence of cardiac arrhythmia, a major problem in operations on the heart, is related to this aberration. Correction of this abnormal situation is one of the important assignments facing anesthesiologists.

ESOPHAGUS

During recent years the feasibility of resection of long lengths of the esophagus for cancer with reestablishment of alimentary continuity by intrathoracic esophagogastrostomy has been demonstrated. The stomach can even be mobilized sufficiently to bring it up into the cervical region. But in some cases the pathologic process, especially if benign, may be such that resection of only a limited segment of the esophagus is necessary. In the past it was taught that end-to-end anastomosis of the esophagus after resection of even a few centimeters of the gullet was not feasible because of tension and poor supply of blood. Laboratory and clinical experience during the past few years, however, has demonstrated that with adequate mobilization and careful suturing technique partial esophagectomy with reestablishment of continuity by anastomosis of the esophageal ends is feasible in selected cases.

Recently much has been added to the understanding of esophagitis and acid-peptic ulceration of the lower esophagus. It is pertinent to note that the incidence of these lesions has been increased by complications of esophageal and gastric operations done for other reasons. Clinical and experimental data have forcibly demonstrated the great vulnerability of the lower esophagus to acid-peptic juice. The normal mechanism for preventing regurgitation of gastric contents into the esophagus consists of an intrinsic muscular mechanism in the walls of the esophagus and, even more important, the anatomic arrangement at the diaphragmatic hiatus. The angles at which the esophagus passes through the hiatus and enters the stomach, the esophagophrenic membrane, and the diaphragmic crus all have an effect. Whenever the esophagogastric junction is displaced above the diaphragm, either as a result of a sliding hiatal hernia or as a result of surgical intervention, the stage is set for esophagitis and ulceration, since the

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diaphragmatic barrier to reflex has been removed. Esophagitis is not necessarily prevented by vagotomy. Therefore the surgeon would wisely not interfere needlessly with a normal esophageal diaphragmatic hiatus and should leave the entire stomach below the diaphragm whenever this is possible.

It is well known that many patients with esophageal hiatus hernia are asymptomatic. It is important to differentiate those patients with a paraesophageal hiatus hernia where the esophagogastric junction remains below the diaphragm from those patients in whom the esophagogastric junction has moved into the chest. In the latter type of sliding hernia, symptoms and esophagitis are much more likely to be present. The treatment of the esophagitis secondary to hiatal hernia is the surgical correction of the hernia through a transthoracic approach.

The primary treatment of so-called cardiospasm is peroral dilatation. If this proves inadequate, surgical intervention may be indicated, but any operative procedure which results in free regurgitation of gastric contents into the esophagus may eventually lead to a worse situation than the original condition. The simple procedure of cardiomyotomy is the operation of choice.

Recent clinical evidence has demonstrated that most cases of so-called congenital shortening of the esophagus are primarily sliding hiatal hernias with secondary esophagitis. It is surprising how short an esophagus may appear on the roentgenogram and still be stretched to its original full length by the surgeon, provided the esophagitis has not been present too long.

LUNGS AND PLEURA

In the last few years there have been continued advances in operations on the lungs and pleura. Antibiotics have had a profound influence. The thoracic surgeon has aimed more at conserving pulmonary function as well as further lowering morbidity and mortality.

The incidence of pulmonary abscess has been lowered by antibiotic treatment of early inflammatory processes. The management of a pulmonary abscess consists of intensive antibiotic treatment in the acute stage, and, if healing does not occur, surgical excision of the permanently damaged part of the lobe or lung.

Pulmonary resection plays an important role in the treatment of bronchiectasis. The development of surgical techniques which permit the removal of any individual or combination of pulmonary segments has permitted more conservation of pulmonary tissue and further extension of surgical treatment in cases of bilateral lesions.

Many articles have been written on the surgical treatment of so-called cystic disease of the lung. A review of the literature indicates much confusion because of inadequate correlation of clinical and pathological features. Many such lesions are well treated surgically, but it is important that localized obstructive emphysema, such as follows staphylococcus pneumonia in infancy and childhood, not be subjected to surgical excision, since such lesions usually disappear spontaneously.

The results of surgical treatment of benign pulmonary tumors have been excellent. Most neoplasms of the lung are malignant, however, and in this group the late results are very poor. Although the risks of surgical treatment are small, relatively few patients are operated upon while the disease is limited to the lung. Physicians must recognize that almost any undiagnosed shadow in the lung, even though the patient is entirely asymptomatic, may be a bronchogenic carcinoma. Exploratory thoractomy, and not merely observation, is the indicated program for the undiagnosed density in the lung. Fear that the lesion might be tuberculous is no longer a valid reason for delay.

Great strides have been made in recent years in the surgical treatment of tuberculosis. Surgical excision of portions of or the entire lung for pulmonary tuberculosis are now commonplace. Streptomycin has undoubtedly been very important in reducing the risks and increasing the scope of such operations. Today various collapse procedures, especially thoracoplasty, as well as the newer more direct surgical measures like resection are to be considered in conjunction with general medical treatment. Tuberculous empyema, a dreaded complication in the past, can now be treated with far better results by the combination of chemotherapy and surgical removal of the infected pleural lining together with, if necessary, the diseased pulmonary tissue.

Decortication of the lung, although not a new operation, has really been developed during the past few years. It is now known that in most cases of clotted hemothorax, long-standing pneumothorax, and empyema the thick layer which overlies the visceral pleura can be removed surgically, and thus expansion of the lung can be obtained provided that intrapulmonary disease does not prevent such reexpansion. If the underlying lung is not diseased, reexpansion can even be attained after many years of collapse. The advantage of such restoration of pulmonary function is obvious.

When localized bronchostenosis is encountered without destruction of the lung distal to the obstruction, transthoracic bronchotomy and plastic procedure on the bronchus may avert lobectomy or pneumonectomy. Similar procedures on the trachea are a recent important development.

MEDIASTINUM

Since x-ray surveys have become common, many mediastinal masses have been detected in the asymptomatic stage. A correct diagnosis preoperatively is often not possible, but such lesions should be removed surgically unless a real contraindication to operation exists. Even in some cases of bilateral hilar lymphadenopathy, exploratory thoracotomy is indicated in order to establish a positive diagnosis.

That respiratory difficulty in infancy and childhood may be caused by tracheal compression from anomalous blood vessels has been recognized re-

cently. In any case of stridor in an infant, study of the esophagus with barium should be carried out in order to determine whether or not it is caused by a vascular ring around trachea and esophagus. Such a vascular compression can be relieved by operation.

HEART AND GREAT VESSELS

Cardiac tamponade, rather than hemorrhage, has been recognized for many years as the prime factor in the death of many patients with stab wounds of the heart. The experience of the past decade, however, has stressed the great value of immediate needle aspiration of the blood from the pericardium as a life-saving measure. Surgical intervention may also be necessary.

The advent of streptomycin has permitted an early surgical attack on tuberculous pericarditis with cardiac compression. By the combination of prolonged chemotherapy and relatively early surgical removal of the tuberculous and fibrotic constricting membrane, satisfactory results may be anticipated.

Studies by cardiac catheterization of patients with constrictive pericarditis have added to the understanding of the pathologic changes in this condition and should lead to better surgical treatment. The chief sites of constriction are not the same in all cases, and variations must be recognized. By cardiac catheterization studies it has been learned that patients with constrictive pericarditis often have increased pressure in the pulmonary artery. Such investigations combined with surgical experience have demonstrated the importance of thoroughly decorticating the left ventricle and not merely concentrating attention on the inflow area of the right heart and anterior aspect of the ventricles.

The surgical correction of patent ductus arteriosus is a well-known chapter in medical history. It should be borne in mind that the percentage of patients with a patent ductus who do not have a typical "machinery" murmur is higher than published reports have indicated.

The recent advances in the surgical treatment of congenital heart disease with cyanosis have aroused widespread interest. It should be recognized that the results of operations which increase the flow of blood to the lungs are not uniform because of such factors as the degree of overriding of the aorta in the tetralogy of Fallot. In a field of surgery as recently developed as this, many changes are to be expected. Direct operations on the pulmonary valve are a new advance. Pulmonary valvulotomy is undoubtedly the logical treatment for isolated pulmonary stenosis, but the place of this operation in the therapy of tetralogy of Fallot awaits further experience.

The surgical treatment of coarctation of the aorta has been another dramatic advance. In this connection the organization of blood vessel banks to serve as a ready source of supply, when vessel grafts are needed, should be mentioned.

The patient with severe mitral stenosis can now be improved by surgical freeing of the margin of the fused valve leaflets. That such an operation does not necessarily lead to significant mitral regurgitation has been demonstrated.

These are but a few of the many recent advances in the cardiovascular and other aspects of thoracic surgery.

Careful and continued "follow-up" of patients subjected to the newer surgical procedures is of extreme importance to the compilation of maximum information concerning the later results and consequences of such operations.

3 East 71st Street.

A Study of Small Bowel Tumors

With Special Emphasis on Clinical Aspects

E. J. Joergenson, M.D., *Glendale*, and Laurel A. Weibel, M.D., *Los Angeles*

SUMMARY

Ninety-eight patients with 100 different tumors of the small bowel were studied. There were more malignant than benign tumors. Adenocarcinoma was the commonest lesion and the ileum the most frequent anatomical site of all tumors. Except for carcinoid tumors, the lesions were observed more often in male than in female patients. The average age of patients in this series was higher than that reported in most other series. Loss of weight, and abdominal pain were the most constant symptoms. Clinical syndromes of anemia and bleeding, small bowel obstruction, biliary obstruction, perforation with peritonitis, abdominal tumor, melanosis with small bowel polyposis, and cutaneous von Recklinghausen's disease with small bowel neurofibromatosis were encountered either alone or in combination.

In the group operated upon, a resection of the involved segment with end-to-end anastomosis was done when feasible. None of the patients operated upon before 1946 lived as much as five years after operation. The most common causes of death were extension of the primary tumor and metastasis, peritonitis due to perforation, associated bronchopneumonia, and hemorrhage.

THAT tumors may occur in the small intestine is a fact too often ignored. The purposes of this study are to emphasize this fact, to stress the importance of a complete investigation of the patient with digestive complaints, to enter a plea for earlier diagnosis and treatment, and to add to the literature a report on a series of 100 tumors of the small bowel observed in 98 patients during a 13-year period at the Los Angeles County Hospital.

The experience of any one surgeon in diagnosing and treating tumors of the small bowel is limited. As a result the mortality rate in such cases is higher than in cases involving tumors of any other part of the gastrointestinal tract. The low salvage rate, in view of the fact that many of these tumors are slow-growing and metastasize late, is undoubtedly influenced by the long duration of the disease before it is diagnosed and treated. If the cause of a digestive complaint is not determined in a thorough clinical investigation, exploratory laparotomy may be indicated. Exploration should include careful examination of the entire small bowel.

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REVIEW OF THE LITERATURE

The incidence of malignant tumors of the large bowel is reported as 3.66 per cent of all malignant lesions, and of the small bowel as 0.098 per cent.[21] Willis[24] reported a series of 17 carcinomas of the small bowel and 190 of the large—a ratio of approximately 1:11. In most reported series,[4, 7, 8, 15] it was noted that small-bowel tumors were more often malignant than benign. Spier[22] stated that 3 per cent of all gastrointestinal carcinomas and 60 per cent of intestinal sarcomas occur in the small bowel. After the appendix the small intestine is the most common site of carcinoid tumors.[12] Leiomyomas make up 1 per cent of all gastrointestinal tumors, and hemangiomas 0.3 per cent.[2, 13] One-half of all gastrointestinal lipomas occur in the small intestine.

Cattell[5] declared that although small-bowel tumors are relatively rare, the diagnosis should be considered when examination of the stomach and colon does not reveal a cause for abdominal pain or bleeding. Rouse[20] listed, as indications for special studies, melena or the persistent presence of occult blood in the stools with unexplained anemia, abdominal pain or tenderness, and altered bowel function. X-ray studies done by a skilled radiologist may determine the presence of the lesion in only 25 per cent of cases.[6] A long intestinal tube has been used to locate the site of bleeding and also to collect specimens for cytologic study, with promising results in a few cases.[23, 16] Cattell[5] recommended that if definite diagnosis is impossible by other means, exploratory laparotomy be carried out, with thorough investigation of the small bowel.

The operative mortality rate in small-bowel carcinoma is 44 per cent and the five-year survival rate less than 5 per cent.[9] Similarly, prognosis in lymphosarcoma is poor while in leiomyosarcoma it is fairly good.[10, 19] Carcinoid or argentaffin tumors in the small intestine are reported to metastasize in up to 52 per cent of cases and are usually considered to be of low-grade malignancy.[17] The poor salvage rate is undoubtedly due to the long duration of the disease before treatment is given. Shallow[21] recommended wide segmental resection of all malignant tumors of the small bowel except moderately advanced lesions in the ampullary region of the duodenum; for such lesions he advised radical pan-

creaticoduodenectomy. For benign small-bowel tumors the treatment recommended is that which is indicated by the nature of the complication—intussusception, volvulus, hemorrhage—which leads to the operative diagnosis of the lesion.[3, 19, 18]

ANALYSIS OF DATA

One hundred small-bowel tumors were observed in 98 patients, 62 males and 36 females, during a 13-year period from 1938 through 1950. Ninety of the patients were Caucasian, seven Negro, and one Oriental. Sixty-one of the tumors were malignant and 39 benign. Thirty-four of the malignant tumors were in males and 27 in females—a ratio of approximately 7:5. The majority of benign and malignant tumors occurred in patients in the seventh and eighth decades of life (Chart 1). This may be explained by the fact that many of the benign tumors were only incidental in patients dying of other causes. Furthermore, in a charity hospital the average age of patients is higher than it is in the ordinary private hospital.

Anatomical Location. One carcinoid tumor, one sarcoma, and 19 carcinomas occurred in the duodenum (Table 1); but, except for carcinoma, the greater proportion of malignant lesions were in the ileum. Benign tumors occurred with equal frequency in duodenum and ileum. All sectors of the small intestine were involved in two cases of benign tumor.

Annual Distribution of Cases. Small bowel tumors were recognized with greater frequency both at operation and at autopsy during the last five years, and particularly during the last two years, of the period studied (Chart 2). During the 12 months July 1, 1949, to June 30, 1950, there were 202 patients admitted with a diagnosis of malignant disease of the large bowel and 16 with a diagnosis of malignant lesion of the small bowel, or a ratio of 12.6:1. In this series, the neoplasms were discovered at operation in 34 instances. Autopsies were done in 79 cases, in 15 of which operation had been done.

TABLE 1.—*Anatomical Location of Tumors*

Lesion	Duodenum Supra-Ampullary	Duodenum Peri-Ampullary	Duodenum Infra-Ampullary	Jejunum	Ileum	Through-out	Totals
MALIGNANT	21			11	29		61
Carcinoma	11		2	2	7		28
Carcinoid	1			2	9		12
Sarcoma	1			7	13		21
BENIGN	14			9	14	2	39
Adenomatous polyps	1		2	3	5		17
Leiomyoma	2			4	3		9
Neurofibroma	2			....	4	1	7
Lipoma	1			....	1		2
Heterotopic pancreas	....			1	....		1
Hamartoma	....			1	....		1
Lymphangiectatic polyp	....			....	1		1
Multiple hemangiomata	....			....	....	1	1

Pathologic Types. The various kinds of tumors observed are listed, in the order of incidence in this series, in Table 2. Since adenocarcinoma was the most common malignant lesion and the adenomatous polyp the most common benign tumor, it is suggested that one may be precursor of the other.

Symptomatology. The average duration of symptoms (Chart 3) in carcinoma was 5½ months, in sarcoma 9½ months, in carcinoid tumor 19 months; and the average for benign tumors was 23 months.

Benign neoplasms of the small intestine rarely cause symptoms except as complications develop. This may largely be true of malignant tumors also.

CHART 1

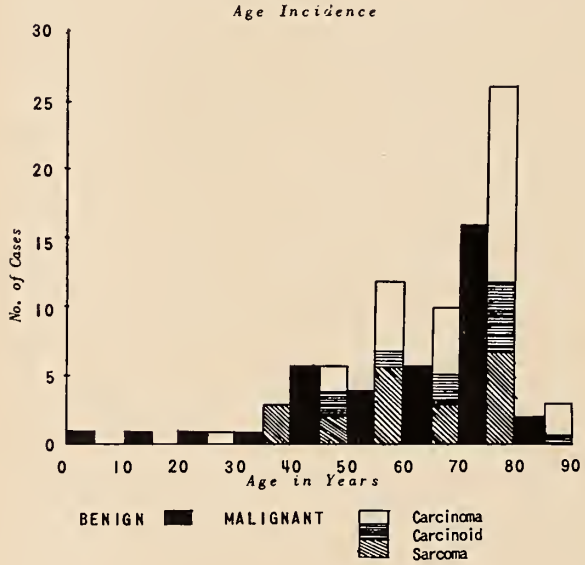

CHART 2

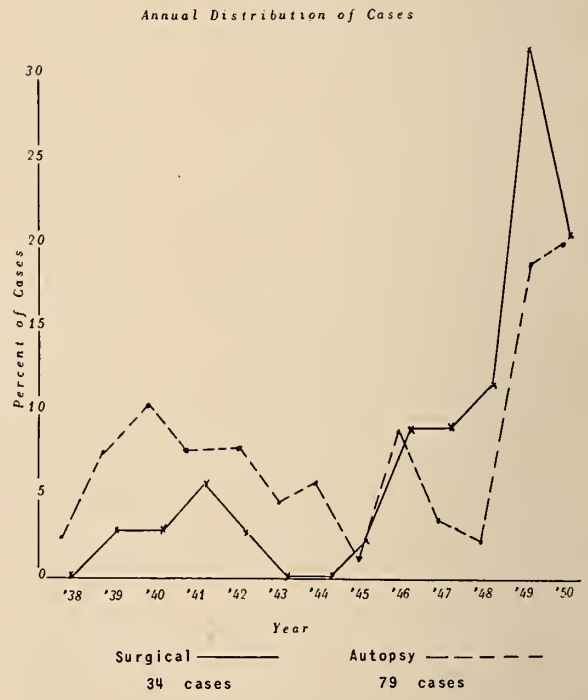

TABLE 2.—*Pathologic Types of Tumors*

Malignant		Benign	
Adenocarcinoma	28	Adenomatous polyps	17
Carcinoid	12	Leiomyoma	9
Lymphosarcoma	10	Neurofiroma	7
Leiomyosarcoma	7	Lipoma	2
Neurofibrosarcoma	3	Hamartoma	1
Melanoma	1	Heterotopic pancreas	1
		Lymphangiectatic polyp	1
		Multiple hemangiomata	1
Totals	61		39

In the present series the most commonly observed individual symptoms were loss of weight, pain, nausea and vomiting, and melena. Loss of appetite due to mechanical interference with the passage of food and the systemic effects of disseminated malignant disease resulted in loss of weight in 40 patients (Table 3). Although pain was a prominent symptom, it differed considerably because of the diversified etiologic factors. Vomiting, observed in 30 instances, might have been expected to occur more frequently, but the liquid content of the small bowel passes through remarkably small openings without producing obstruction.

Bleeding is more often occult in ulcerating mucosal tumors and massive in the cavitating, excavating connective tissue tumors of muscular origin.

Clinical Syndromes. Symptoms (Table 4) may be classified into one or more of the following syndromes: Bleeding with anemia, small-bowel obstruction, biliary obstruction, perforation with peritonitis, abdominal tumor, circumoral pigmentation with small-bowel polyposis, and cutaneous von Recklinghausen's disease with intestinal neurofibromatosis or leiomyomata.

Bleeding or anemia associated with melena, tarry stools, persistent occult blood on a meat-free diet, hematemesis (in three cases), and increasing weakness and fatigue was the commonest syndrome. In many cases, no abnormality was observed in roentgen studies of the large bowel and upper gastrointestinal tract with barium, and not infrequently the patients were considered neurotic.

Obstruction owing to a stenosing lesion or to acute or recurrent intussusception caused by a polypoid tumor, was the next most frequent symptom complex. Patients with symptoms of this order gave a history of variable duration of colicky abdominal pain, vague discomfort (often interpreted as "gas"), a change in bowel habit (usually constipation), and recurrent nausea and vomiting. It is significant that vomiting occurred in several cases without nausea.

Except for two cases, the syndrome of biliary obstruction occurred in association with lesions in the periampullary region of the duodenum. Bleeding with jaundice and pruritus, vague postprandial discomfort in the right upper quadrant of the abdomen and in the epigastrium, a palpable gallbladder, and occasionally nausea and vomiting were characteristic observations. In some cases the jaundice was intermittent but in the majority it was progressive.

Symptoms of peritonitis—severe continuous abdominal pain, rebound tenderness with rigidity, fever, and leukocytosis—may be the only manifestation of a perforating neoplasm in the small bowel. There may be associated symptoms of small-bowel obstruction. It should be remembered that elderly patients at times respond abnormally to peritonitis; in the present series a few had little or no abdominal pain and no leukocytic response to the disease.

An abdominal tumor was the primary symptom in two patients who complained of abdominal fullness and of a palpable "lump." There were a number of patients with other primary symptoms who also had a palpable tumor.

Less common, perhaps, but of interest are the last two syndromes listed in Table 4. In one patient in the present series the condition observed was like that described by Jeghers[14] — intestinal polyposis with melanotic spots on the oral mucosa, lips, and digits. This patient was twice operated upon for obstruction and a jejunal adenoma was removed on each occasion. Five patients with cutaneous von

CHART 3

Duration of Symptoms

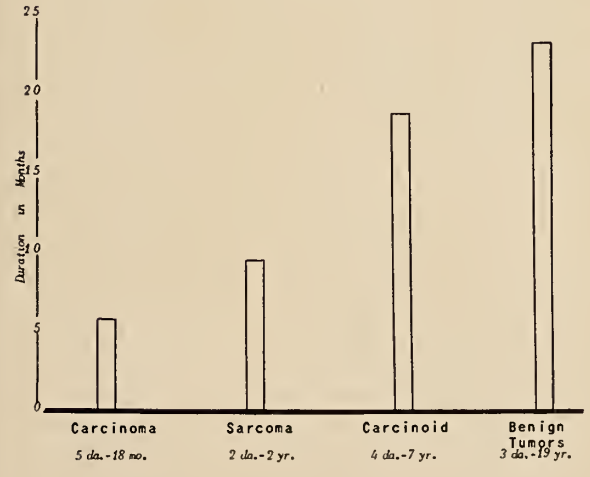

TABLE 3.—*Symptoms of Small Bowel Tumors*

Symptoms	Carcinoma	Carcinoid	Sarcoma	Benign Tumors	Totals
Weight loss	19	6	11	4	40
Pain	13	6	11	5	35
Nausea	7	2	7	2	18
Vomiting	12	5	8	5	30
Anorexia	5	1	4	1	11
Jaundice	9	....	1	1	11
Weakness	6	....	3	1	10
Constipation	5	....	6	2	13
Diarrhea	4	2	2	2	10
Melena	7	3	5	3	18
Hematemesis	2	2	....	....	4
Fever	2	3	1	1	7
Gas or Bloating	4	4	4	....	12
Hiccoughs	....	1	1	....	2
Pruritus	2	....	....	....	2

Table 4.—*Clinical Syndromes*

Bleeding with anemia (in 38 cases): Melena, occult blood or tarry stools, hematemesis, weakness and fatigue
Small bowel obstruction (in 31 cases): Incomplete and recurrent pain, nausea and vomiting, "gas," constipation
Biliary obstruction (in 14 cases): Jaundice, pruritus, nausea and vomiting, vague right upper abdominal pain, palpable gallbladder
Perforation with peritonitis (in 15 cases): Constant pain, tenderness with rebound rigidity, fever, leukocytosis
Abdominal tumor (in 3 cases): Sensation of abdominal fullness or heaviness with or without digestive complaints
Melanosis with small-bowel polyposis (in 1 case)
Cutaneous von Recklinghausen's disease with intestinal neurofibromatosis (in 5 cases)

Recklinghausen's disease had similar lesions of the small bowel which were multiple in four cases. It is also noteworthy that in two cases of benign leiomyomata and in two of leiomyosarcomata there was an associated diagnosis of fibromyomata uteri.

DIAGNOSIS

In 16 per cent of the 62 cases in which symptoms were present, the lesion was correctly diagnosed; in 19 per cent the diagnosis was obstruction of the bowel, and in 8 per cent gastrointestinal malignant disease was diagnosed but the site of the lesion was not determined. In the remaining 58 per cent the diagnoses were incorrect. It should be mentioned that since many of the patients entered the hospital critically ill, an adequate study could not be done. Diagnostic measures included examination of stools for occult blood and parasites, upper and lower gastrointestinal barium studies, and small-bowel progress meals, proctosigmoidoscopy, gastroscopy, peritoneoscopy, and the use of a small-bowel tube to determine the site of obstruction. No one of these procedures was diagnostic in more than three cases, but it is only through the use of these studies in conjunction with a careful history and physical examination that diagnostic accuracy can be improved. As stressed before, if diagnosis cannot be confirmed otherwise, operation is indicated as a diagnostic as well as a therapeutic procedure.

TREATMENT

Thirty-four patients in this series were operated upon and malignant tumors were found in 78 per cent of them. En bloc resection with end-to-end anastomosis was done in 15 cases of malignant growth and five cases of benign lesions of the jejunum and ileum. Of the four patients with ampullary lesions of the duodenum, one was treated with local excision and three with resection of the Whipple type. Four patients were treated with side-tracking measures for palliation, and in three cases only exploration and biopsy were carried out. There were no five-year survivals among the eight patients operated upon before 1946.

Causes of Death. Thirty-four patients were operated upon, seven for benign and 27 for malignant lesions. Four of those with benign lesions are alive, while three of those with malignant disease had lived, at the time of this report, an average period of 21 2/3 months after operation. There were 13 postoperative deaths in the group with malignant lesion, while 11 survived the first two-week period for an average of 15 months.

The most common cause of death (Table 5) was recurrent disease with metastasis. Next in order were postoperative bronchopneumonia, peritonitis secondary to perforation, pulmonary embolism, postoperative bleeding, evisceration, infarction of bowel attributable to interference with blood supply. In three cases death was caused by unrelated disease. Only one patient with a benign tumor died as a result of direct complications of the tumor.

Autopsy was done in 36 cases of malignant tumors and 31 cases of benign lesion. A small-bowel tumor was an incidental finding in nine of the former and 27 of the latter group. The majority of patients with malignant tumor died as a result of the local disease and metastasis (Table 6). Peritonitis due to perforation, intercurrent bronchopneumonia, bowel obstruction, and massive hemorrhage, in order of frequency, were other causes of death.

DISCUSSION

Tumors of the small intestine are not rare, although compared with tumors of the lung, stomach, and colon they are not common. This was emphasized in this series in which the incidence of malignant tumors of the small intestine was one-twelfth the incidence of such lesions in the large intestine. Further, such tumors as sarcoma and lipomas more often involve the small intestine than any other part of the gastrointestinal tract.

Table 5.—*Causes of Death in Cases in Which Operation Was Carried Out*

	Malignant	Benign
Recurrent disease with metastasis	6	....
Postoperative bronchopneumonia	5	....
Peritonitis due to perforation	5	1
Pulmonary embolism	2	....
Postoperative bleeding	1	....
Small bowel infarction due to interference with blood supply	1	....
Unrelated disease	3	2
Totals	24	3

Table 6.—*Causes of Death (Autopsy Cases)*

	Malignant	Benign
Local disease with metastasis	14	....
Intercurrent bronchopneumonia	2	....
Peritonitis due to perforation	9	1
Bowel obstruction	1	1
Massive hemorrhage	1	1
Unrelated disease	9	27
Totals	36	30

This study indicates that where there is greater awareness of these lesions, they are diagnosed with greater frequency. Abdominal exploration should include a systematic study of the entire small bowel; even then, soft polyps may be overlooked.

In cases of malignant disease of the small intestine, the salvage rate in this series was exceedingly small. This is explained in part by the duration of symptoms prior to the establishment of diagnosis and treatment. Durations of symptoms of five and one-half months for carcinoma and nine and one-half months for sarcoma and 19 months for carcinoid tumors prior to treatment are dangerously long.

Many factors are responsible for the delay. Physicians are accountable for some of it. Symptomatic treatment of dyspepsia with incomplete diagnostic study is a poor approach to the problem of carcinoma of the small intestine. In approximately one-third of the cases in this series, treatment was begun only after the precipitous onset of major complications. It is obvious, then, that the earlier operation is done, the greater the opportunity to deal with uncomplicated local disease, and the higher the salvage.

Since many of the patients were admitted in a condition necessitating emergency operation, any attempt at complete diagnosis was impossible. On the other hand, in cases in which the patient has symptoms of chronic dyspepsia or recurring cramping abdominal pain, yet the routine x-ray studies of the stomach, gallbladder, and colon do not supply a definite clue, the small bowel must be examined carefully by x-ray. If any doubtful lesion is observed, it should be investigated further with selective x-ray and cytologic studies, utilizing the long intestinal tube.

632 North Brand Boulevard.

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The Physician and the Atomic Bomb

V. P. Bond, Lieut., MC, USN; M. C. Fishler, Ph.D., M.D.;
W. H. Sullivan, Ph.D., *San Francisco*

SUMMARY

Atomic detonations are essentially of two types: contaminating and non-contaminating. The only non-contaminating burst is the high air burst, since it does not result in the contamination of the ground with radioactive bomb residue. This type of burst results in blast, thermal and ionizing radiation injury (often combined in the same patient).

The only injurious agent peculiar to atomic warfare is ionizing radiation. With a high air burst these effects are due mainly to gamma rays, and they are no longer present after the first few seconds following the explosion. Although only about 15 per cent of the deaths resulting from this type of burst are likely to be due primarily to ionizing radiations, exposure to the latter may well complicate recovery from trauma.

Since there is a latent period of a number of days between the initial and later symptoms and signs of whole body radiation exposure, it does not constitute an emergency and can be treated after the initial period of the disaster has passed.

With the detonation of a contaminating burst (a surface, underwater or underground burst) the radii of damage from blast and thermal radiation are considerably less than with a high air burst. Two types of radiation may result from the radioactive fog (base surge) formed after an underwater burst—transit radiation and deposit or continuing radiation. The deposit radiation includes that resulting from inhaled or ingested radioactive material as well as that deposited on clothes or skin. Bomb residue contains material which would localize in bones if it entered the body, and much of it has a long radioactive and biological half-life. It would thus bombard the radiosensitive bone marrow for long periods.

Fortunately, the materials which would localize in bone are poorly absorbed from the gastrointestinal tract and lungs.

In general radiation injury to a person exposed to a contaminating burst should be reckoned primarily in terms of the penetrating gamma radiation to which he was exposed, rather than in terms of possible internal radiation from ingested or inhaled contaminants.

The principles of broad planning, careful triage, decentralization of medical aid, intelligent stockpiling, and the greatest good to the greatest number are to be stressed in medical defense planning.

The best appraisal of exposure and its degree of seriousness is, as it is with disease in general, an accurate clinical evaluation by the physician. The tempo of the disease is an important aid in evaluating severity of exposure. The use of the dosimeter in judging the fate of a given individual is, at least at present, of limited value.

THE purpose of this article is to present in a concise form aspects of atomic warfare that are of importance to the practicing physician who may find himself faced with the problem of caring for the victims of an atomic disaster. In the event of atomic attack on our cities the physician will be a key figure in providing health services to the victims, and it is therefore of the utmost importance that he be fully cognizant of the situation he may have to face shortly after the attack.

The number of dead and injured in the event of atomic attack would be overwhelming. For example, if this were to occur in a city with a population of a quarter of a million, 50,000 to 100,000 injured and 5,000 to 20,000 dead are not unreasonably high estimates. Thus, because of sheer numbers the casualties could not possibly receive what would normally be considered adequate care. In consequence of this, detailed advance planning is of the greatest importance. Such plans are dependent on a careful evaluation of the probable types of injuries, the relative numbers of each type, and the urgency of the need for treatment.

Any predictions of numbers of dead and injured can only be rough estimates at best, for the actual numbers would depend on the number of bombs used, the kind of bursts, the sizes of the bombs, the shape and topography of the targets, the weather, the time of day, the population density, etc. Most predictions have been for the air burst only, for this use of the weapon is believed to be the most destructive. However, the major effects of bursts of any

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type should be considered. A miss could conceivably convert what was intended to be an air burst into an underwater or surface burst.

KINDS OF ATOMIC DETONATIONS

Atomic detonations may be segregated into contaminating and non-contaminating. The only burst of non-contaminating type is the high air-burst, in which blast, heat, and ionizing radiation expend their energy over a wide area in the course of a few seconds. As the cloud ascends, all radioactive bomb residual is carried aloft and no significant* contamination of the ground with radioactive material occurs.[8] Essentially no ionizing radiation other than the immediate burst of gamma rays is encountered. It is as though a giant x-ray machine were suddenly turned on in the sky, and were left on for approximately one minute and then turned off. And just as one would not hesitate to enter an x-ray room and handle the patient immediately after the beam is turned off, so it is safe for rescue teams to enter the bombed area *immediately*.

A "contaminating" burst can be defined as any detonation in which the "fireball" comes in contact with the earth's surface. This results when the detonation occurs either on or below the surface of the earth, or at an altitude such that the "fireball" can touch the surface. The low air, the surface, the underground and the underwater burst are of the contaminating type. In general, the radii of damage for blast and thermal effects are decreased as compared with those of the air burst. The ground (or water) is actually contaminated with residual bomb products, both fissioned and unfissioned. Also, activity induced in the earth or water by neutrons liberated in the fission process may raise the general level of contamination.

With a burst of this type, then, the bombed area actually becomes radioactive, as though radium or other radioactive material had been spread over the area, and this radioactive material continues to emit ionizing radiation for long periods after the detonation. With a burst such as the underwater detonation, for example, it is likely that significant quantities of radioactive material can be carried well beyond the range of major blast or thermal damage.

The chief distinction between the contaminating and non-contaminating bursts lies in the presence or absence of residual radioactivity in the bombed area after the detonation. Blast, heat, and nuclear radiation may be present in varying degree in bursts of any type, but the magnitude of each effect in producing casualties will vary in accordance with the manner in which the weapon is used.

THE AIR BURST

The bursts of various types and the important phenomena associated with each have been reviewed. The effects of the high air burst will now be considered further. And while blast, heat, and ionizing radiation are treated separately, it is well to keep in mind that these phenomena rarely produce effects singly and, therefore, injuries generally would be multiple in nature.

Blast Effects

The effects of blast on man can be divided into two categories:

1. *Direct* effects resulting from interaction between the shock wave and the human body.

2. *Indirect* effects resulting either from objects set in motion by the blast striking the body, or from the body striking stationary objects.

Direct effects will be mentioned only to eliminate them from further consideration. There are essentially no circumstances during or following an atomic burst in which direct blast pressure could injure a person who would not be killed "many times over" by other effects.

Indirect blast injuries are mechanical injuries and are similar to those produced by falls, by blows with blunt instruments, or by automobile accidents. They consist of contusions, lacerations, simple and compound fractures, internal injuries, penetrating wounds, crushing injuries, etc. Injuries from flying glass would be extremely common. In the Japanese disasters mechanical injuries among survivors were in general of a minor nature; the absence of major trauma among survivors is ascribed to the fact that victims so afflicted could not escape the conflagration which developed in the first few hours after the burst.[12] In cities of more fireproof construction, or under improved conditions of rescue, the number of survivors with major traumatic injuries might well be much larger than it was in Japan.

The kind of mechanical injury referred to is, of course, not peculiar to the bomb. But it must be remembered that there might be *thousands* of victims with injury of this type for whom treatment would be needed almost simultaneously. There would be neither time nor facilities to care for all of them adequately.

Thermal Effects

The thermal radiation from the exploding bomb can cause injury in two ways:

1. The radiant heat may act directly on exposed personnel and produce *primary burns* or *flash burns*. This kind of injury would happen only to people who were in the open or near a window.

2. The radiant heat can char structures, clothing and other combustibles in the affected areas, and those burning objects may themselves inflict burns. Such burns are termed "*secondary*" burns.

Actually, radiant heat probably would contribute much less to the igniting of materials than would overturned stoves, electrical "shorts," etc. At any rate, in the first few hours following the burst, a widespread conflagration would kill potential survivors trapped in the wreckage or otherwise unable to leave the scene.

The extreme rapidity with which the thermal radiation is delivered and the relatively poor heat

* There could be some ground contamination resulting chiefly from a "fall-out"; but the levels of activity would be very low and would constitute a minor hazard compared to the gravity of the over-all situation.

conductivity of the skin results in burns that are in general superficial and painful, but which may be deep in victims near ground zero.* "Shadow effects" are common; a man be shielded by buildings, clothes, or even by body contours.[12] Radiant energy burns generally are on one side of the body only. Patterned clothing may permit burns beneath dark-colored areas while the skin beneath the light areas is not burned.

Burns present no new problem, but it must be recognized that they are large open wounds and that shock and infection are a serious threat. Flash burns are not uncommon in industry, and certainly the treatment of burns from flaming structures is in every physician's experience. The well-known factors of the location, the degree and the body area involved enter into the appraisal of the severity of the burn.

Effects of Ionizing Radiation

The only injury peculiar to atomic warfare is that caused by ionizing radiation. However, in the event of an airburst ionizing radiation would not be the chief cause of mortality. Only 15 per cent of the Japanese fatalities are attributed primarily to ionizing radiation.[12] But if measures are taken to prevent thermal and blast injury, ionizing radiation would assume much greater importance because it is more difficult to shield against.

Radiation injuries resulting from a high air burst are chiefly the result of the gamma rays which are liberated during the first few seconds.† As was stated, these penetrating gamma rays are similar in all respects to high-energy x-rays. The biological effects of such rays can be duplicated in the laboratory by the use of either high energy x-ray machines or by use of gamma ray sources.

The sudden burst of gamma rays from an air burst may be important from two aspects:

1. Large doses of the rays will produce the clinical picture of acute radiation injury,[7] or this picture as it may be modified by partial shielding of the body.

2. With smaller doses, although the complete clinical picture of acute radiation injury may not be evident, exposed persons may become debilitated and particularly susceptible to infection.[13] This complicating factor may interfere with healing of burns and traumatic injuries.

The clinical picture of acute radiation injury can be characterized as follows:[10]

Following an exposure to a large dose (300 r to 500 r) anorexia, nausea, vomiting, malaise, fever and thirst may appear in the first few hours. These symptoms subside and are followed by a period of variable length (a few days to a few weeks) in which the patient is apparently well. During this period leukopenia, thrombopenia, and disappearance of reticulocytes become evident. A decrease in lymphocytes appears early and the granulocyte changes follow. Anemia is slow in developing.

The latent period usually ends with the onset of epilation, usually of the head, and often of the armpits and pubes. This is reversible. Anorexia and malaise return, as does a stepwise-rising fever. Pharyngitis and oropharyngeal ulcerations (agranulocytic angina) appear; then bleeding tendencies—petechiae, bloody diarrhea, nose bleeds, purpuric spots, etc. This may be followed by the development of enteritis, hemorrhagic lobular pneumonia and other infections that may result in death. Occasionally, a more prolonged course characterized by debilitation and emaciation may precede death.

In patients who recover, the signs and symptoms of the disease disappear approximately in the following order: pharyngitis, diarrhea, petechiae, fever, and oropharyngeal lesions. Recovery is associated with an increased leukocyte count in the peripheral blood. However, a patient in whom the leukocyte count is returning to normal may die. Anemia in survivors extends into the period of convalescence.

The pathogenesis of this disease insofar as it is understood at present, is as follows: There are three tissues affected in the main, the bone marrow, the lymphoid tissue, and the gastrointestinal tract. The disease in its terminal stage is not unlike advanced aplastic anemia. With large doses of radiation the result is aplasia of the bone marrow. This results in the blood picture which was described. The low leukocyte count coupled with disturbances of other immunizing mechanisms contributes to a lowered resistance to infection, which in turn permits development of oral, gastrointestinal and pulmonary lesions. There is an absence of cellular tissue reaction around these infectious lesions.

The decreased platelet count is probably an important cause of the hemorrhagic tendency. Also involved possibly are an increase in circulating heparin-like substances in the blood, and an increased capillary fragility. The lack of erythrocyte production and the bleeding tendencies are mainly responsible for the anemia. Infection may also be a contributing factor to the anemia. Depression of the erythroid elements of the bone marrow is pronounced. This is reflected in the reduced uptake of administered radioactive iron into the erythrocytes following total body radiation.

The diarrhea, which is often sanguineous, has been explained on the basis of edema of the bowel, denuding of the mucosa secondary to infection, and hemorrhage.

A most important characteristic of acute radiation injury is the latent period: A severely exposed person may have no serious signs of illness for a number of days. It should be recognized, then, that acute radiation injury does not constitute an emergency and can be treated after the trying initial period of disaster is over.

The dose of gamma radiation necessary to produce death or serious illness depends on several bio-

* The point on the ground nearest the center of detonation.

† The effective range of neutrons liberated during the fission process does not extend beyond the range of total destruction. However, they may assume greater importance in that, if shielding were available to protect adequately against heat, blast, and even gamma rays, neutrons might still be lethal.

logical and physical factors. The dose necessary to kill approximately 50 per cent of a group of exposed human beings† is usually taken to be 400 r, although a few may die after doses as low as 200 r and a few may survive doses as high as 600 r. Hence it is seen that a large individual variation in susceptibility exists. In addition, the previous condition of the exposed person is important in determining the response and prognosis. A sick person is more likely to have serious effects from a given dose of radiation than is a well one. Subclinical or low-grade infections that in themselves would not be lethal may, in conjunction with a usually sublethal exposure to radiation, cause death.[3]

The existence of partial body shielding may be important in establishing the prognosis of a patient, and victims should be questioned about possible partial as well as total shielding. To take an extreme example, if 10,000 r were directed to a small region of the body, i.e., the hand, the victim would not die of "acute radiation injury." But if 400 r were delivered to the whole body about 50 per cent of victims would die. If the abdomen were completely protected with lead,‡ the dose necessary to kill 50 per cent of exposed persons would be of the order of 1,200 r. If everything but the abdomen were protected and the abdomen irradiated, the LD_{50} dose would be about 600 r. The abdomen-shielded persons would probably have a syndrome different from that of those who received whole body irradiation, and the time of death of the abdomen-irradiated persons would probably be earlier than that of the abdomen-shielded. Head irradiation alone probably would produce death at doses of the order of 1,200 r. Obviously, these figures were derived by extrapolation from animal experiments[2] and can be regarded only as rough approximations.

It was stated earlier that the energy of the gamma rays is very great.[8] This high energy is of importance in that it can produce essentially "whole body" radiation in man. This may be clarified if it is pointed out that if small animals such as the rat or mouse are irradiated with 250 KVP x-rays, the energy absorbed at different depths of the animal will be sensibly the same. However, if a large animal the size of a man is irradiated with x-rays of the same energy, the irradiation of the tissues farthest from the beam would be decreased by a factor of approximately ten. If higher energy or more penetrating radiations are used, the dose received throughout an animal tends to be more uniform.

The total dose of radiation that may be received from a high air burst is delivered over a few seconds. There is no time for recovery during irradiation and the effects are maximal. If the total dose is given over several days, for example, as opposed to a few seconds or minutes, the dose necessary to produce serious damage is larger. If intermittent or repeated exposure is experienced, the dose necessary to produce serious damage is also increased. This, again, is because recovery is permitted during irradiation.

Numbers of Injured

The effects of blast, thermal radiation, and nuclear radiation have been considered separately. It is of importance to consider these injuries collectively, to gauge the relative numbers of each kind and to consider where they occur with respect to ground zero.

It is stated frequently that (assuming detonation of the nominal or 20 kiloton bomb) of the people present in the zone extending from ground zero to one-half mile from ground zero, 90 per cent or more would be dead or injured, and that in the second zone extending from one-half mile to one mile, some 80 per cent would be dead or injured. Such a representation, however, is in a sense misleading, for the more remote the zone from ground zero, the greater the population in it because it is of greater area. When 90 per cent or more of the population of the innermost zone are dead or injured, this is a large percentage of a relatively small number of people. Also, the physician would be primarily concerned with the injured survivors, and from this standpoint it is necessary to consider that most of the people in the innermost zones would be killed. Of more importance to the rescuer is a consideration of the probable number of *survivors* in each zone and how many of them are likely to be injured.

Exact figures are not available but it is probable that most of the injured would be found in the zone extending from one mile to a mile and a half from the center of the blast. Considering again that radiation is falling off rapidly at one mile while heat and indirect blast effects are still important at two miles, it is obvious that in the zone where most injuries are likely to occur radiation is not a significant factor. In other words, most of the injured there would have blast injuries or burn injuries or both.

However, it should be stated also that a sizable percentage of survivors needing treatment would be in the zone extending from one-half mile to one mile from ground zero, where gamma rays are still effective. Hence radiation damage can be expected, not only as a primary entity but as a serious complicating factor. The importance of radiation should not be over-emphasized—or discounted.

It should be pointed out again that with modern structures providing protection against heat and blast, and with improved rescue techniques, the chance of survival closer to the bomb is greater and hence the probability of radiation injuries is increased. It should also be reemphasized that only the burned and traumatized victims will need emergency treatment, for lesions and accompanying shock; acute radiation injury, or complicating radiation dosage, does not constitute an emergency.

As to the numbers of casualties, totals are dependent on the size of bomb, type of bomb, number of

† A species difference exists;[9] the LD_{50} for rabbits is about 750 r; for rats, about 650 r; for goats, about 350 r; for dogs, about 300 r. Since most animals that die after acute total-body irradiation do so in 30 days or less, the period of observation for lethality is taken as 30 days, e.g., the $LD_{50/30}$ days is determined. Many severely exposed human beings, however, die between the 30th and 60th days after exposure.

‡ The weight of material required makes it appear at present that a partial body "armor" against bomb radiations is impractical.

bombs used, density of population, etc. But a figure of 50,000 persons who need treatment in a city of 250,000 or more is conservative; 75,000 or 100,000 is not unreasonable. Furthermore it must be remembered that treatment for all *simultaneously* would be required. Relative numbers of casualties can be gained from the following hypothetical breakdown of injuries:[12] Wounds, 70 per cent; burns, 65 to 85 per cent: radiation injury, more than 30 per cent.

Perhaps of more practical value would be information on the expected diagnosis and outcome per 100 casualties. This could be represented as follows:[11] Wounds (no burns), 60; burns (with or without wounds), 40; radiation injury, any degree, 30; died (all causes), 25; died of burns, with or without other injuries, 19; died of wounds, 6.

THE CONTAMINATING BURST

The radius of damage from blast or heat with a burst of the contaminating type would be, in general, less than that of the high air burst. With the subsurface burst, effects of radiant heat might be entirely absent. With an underwater burst off shore, blast may be no problem at all to shore establishments. With the underground burst, it is not unlikely that an earthquake-like phenomenon might cause destruction at a considerable distance.

As with the high air burst, direct blast effects (in air) would be of no practical concern. Indirect blast injuries and burns, if they are present, would not differ qualitatively from those of the high air burst. There might be few or no flash burns and relatively larger numbers of flame burns.

As to radiation encountered with the contaminating burst, some elaboration is necessary. For example, in the underwater burst, as the large mass of water thrown into the air by the detonation falls to the surface, a highly radioactive fog or base-surge forms, which rolls over the bombed area and then ascends into the sky.

Radiation delivered from the base-surge can be divided into two types, transit radiation and deposit or continuing radiation. The transit radiation is delivered as the base-surge rolls over the area and ascends into the sky. Again it is as though a giant x-ray machine had been slowly drawn over the area and then pulled up into the sky out of range. Radiation of this type is delivered to the bombed area over a matter of minutes. It then disappears.

The transit radiation of medical importance, then, is delivered over a short period of time, as with the air burst, and is composed of gamma or penetrating rays like x-rays. Like the high air burst, it can produce total body radiation resulting in acute radiation injury. But as the base-surge rolls over the area, it rains or deposits radioactive materials on objects and personnel below. It is as though a large quantity of radium or other radioactive material had been spread over the bombed area.

The deposit radiation can get on the clothes and on the skin. Here again the x-ray analogy may be used. But here the "x-ray machine"' has not been lifted out of range; it remains on the clothes or on the skin. Still, penetrating gamma rays are given off; still, whole body radiation resulting in acute radiation injury may be produced.

And suppose a person even ingests or inhales the base-surge? Here he has taken numerous "small x-ray machines" or radioactive isotopes into the body; they continue to give off penetrating radiation, the entire body can be irradiated, and acute radiation injury may occur. Again, if large amounts of radioactive fog or mist from the bomb are deposited on the clothes or skin, or even enter the body, acute radiation injury may result.

The penetrating gamma rays are the chief or "controlling" hazard to personnel contaminated shortly after the detonation. But other hazards result from the deposition of radioactive material from the bomb, and in order to describe and evaluate their role it is necessary first to elaborate further on the composition of the radioactive bomb residue.

In addition to gamma emitters, the bomb residue also contains beta-emitting fission products. The emitted beta rays are termed non-penetrating, since fairly energetic beta rays penetrate only a centimeter or less in tissue. If present on or near the skin in large quantities, these rays can produce "beta burns." If beta emitters are inhaled or ingested, the lungs or the gastrointestinal tract can become irradiated.

Unfissioned bomb residue (plutonium or uranium) emits alpha rays. If small quantities of this material gain access to the bones, serious chronic effects may result. A well-known example of this type of injury is that of the watch-dial painters. These people, while pointing their brushes with their lips, ingested enough radium and mesothorium (also alpha emitters) over a long period of time to localize in the bones and cause death after several years, from anemia, infection or osteogenic sarcoma. Certain long-lived beta-emitters found in the bomb residue also localize in the bones and are capable of causing this type of damage. All such long-lived elements (either alpha or beta emitters) can be called collectively the "bone seekers" and can give rise to an "internal radiation" problem. In general, bone seekers are very poorly absorbed from the lungs and gastrointestinal tract, and relatively large quantities must be inhaled or ingested before dangerous amounts gain access to the bones.

To evaluate the hazards from these sources it is necessary to consider the relative amounts of the different types of radiation associated with a given quantity of bomb residue. Initially (soon after the detonation) the amount of gamma and short-lived beta emitters associated with any significant quantity of "bone-seeker" is very large; relatively, the gamma radiation is the overwhelming hazard. The gamma-emitters in general, however, have extremely short half-lives; as time goes on after the burst, the gamma hazard becomes very much reduced and, relatively, the "bone seeker" or "internal radiation hazard" becomes of greater importance.

The important conclusions from these considerations are as follows: Radiation injury to a person

exposed to contamination at the time of an atomic detonation should be reckoned primarily in terms of the penetrating gamma radiation to which the person was exposed. Associated acute beta radiation to the skin or to the lungs or gastrointestinal tract can occur, but, in general, cases of severe exposure of this nature will not be a serious problem. If a victim is exposed to the base-surge and ingests or inhales "bone seekers" in dangerous quantity, he is likely to have received a sufficiently large dose of gamma radiation to result in death before the "bone seekers" can become dangerous.

This does not mean that contamination should not be removed from the skin, for no irradiation should be taken lightly. But the surviving patient should be assured that even though he may have some contamination on his skin as he emerges from the bombed area, if he survives the first few weeks (acute radiation illness period) he is in all probability not doomed to the chronic disease observed in the watch dial painters.

It should be emphasized that the above considerations apply only to victims emerging from the bombed area—that is, the patients who will be seen immediately after the burst. It does not apply to clean-up or reoccupation operations at a later date when the rapidly decaying gamma emitters have essentially disappeared. Here long-lived bone-seekers can be a serious problem. In general, however, such a situation would be encountered late after the bomb detonation and operations would be organized under radiological specialists. The responsibility for radiological safety will not, in general, fall to the practicing physician.

It was stated previously that gamma radiation decreases in amount very rapidly immediately after the burst. An idea of the rapidity of the decay can be obtained from the statement that if a man is trapped in the bombed area and received 100 r over the first hour, if he remains in the area for days or even weeks he will receive a total of only about 120 r.[14] Hence, if a man emerges from the bombed area and has significant amounts of radioactive contamination on him when observed medically, he should be treated as a potential radiation injury casualty. The chances are great that if he is significantly contaminated when he emerges, he has received a large dose of radiation before he emerged.

MEDICAL DEFENSE PLANNING

A resume of the physical and medical effects of atomic bomb detonations has been presented. Consideration must now be given to the means of handling the situation from the medical point of view. The bomb has exploded; the damage has been done: now what is to be done? The task is an overwhelming one. It is of such magnitude that it cannot be considered in ordinary frames of reference. Defense planning on a local level alone would be disastrous. Regional and nationwide planning are mandatory if effective countermeasures are to be developed.

The guiding principle of the defense plan must be the greatest good to the greatest number. This must be emphasized again and again. Selfish motives and self-interest must give way to unified action according to plan.

Medical defense planning is a large subject and it is obviously not possible to cover it adequately in a relatively short article. It will, therefore, be possible to cover only the principal aims of a medical defense plan and how they can be accomplished.

After an air burst has occurred in an urban area, for example, a stream of injured would begin to pour out of the bombed area, leaving behind many seriously injured who could not move out under their own power. Rescue teams would enter the stricken area to guide the stream of victims to medical aid stations and to evacuate the seriously injured. It is natural to inquire, then, into the question of when and where the injured would be cared for. It is obvious that the patient and the physician and his supplies and facilities must be brought together in time and place. Is the patient taken to the treatment center or the treatment center to the patient? In other words, just how much can be mobilized effectively and taken to the patient, and, conversely, how far can the patient be transported? In short, the patient is brought as far as his condition will permit and the availability of facilities for his care requires. Transportation to a point where safety from burning and falling debris is assured is axiomatic.

In order to decide, then, on the kind of treatment facilities needed and where they should be available, the casualties must be analyzed according to severity of injury. Persons mortally wounded would, of necessity, be transported only short distances if at all. That would include persons in shock or impending shock, those with respiratory embarrassment and those with hemorrhage. Their care would be provided for by mobile units on the spot or in casualty stations at the perimeter of the disaster area. The seriously injured who can be transported would be cared for in evacuation hospitals to the rear of the bombed area. It would be necessary to evacuate patients to neighboring cities for care. Persons with minor injuries would be attended to in the casualty stations. If at all possible the latter should be treated far to the rear of the bombed area, thus reserving the close-in facilities for the patients who could not be moved.

It follows that a very important consideration in medical disaster planning is adequate triage or sorting of patients. This would be done at the forward stations. Decentralization of medical aid with large numbers of smaller mobile units and casualty stations would be desirable. Patients would not have to travel so far, and destruction of large centralized facilities would be minimized by this means.

Because of the enormous supplies of plasma, plasma substitutes, bandages, splints, essential drugs, etc., which would be needed, adequate care of victims would depend on stockpiling well in advance of expected attack. Neighboring areas must plan to cooperate by sending physicians and supplies to the bombed area and by receiving evacuated patients.

Rescue teams and personnel of the treatment units

would not, in all likelihood, find the victims of an atomic disaster easy to handle.[13] They probably would be stunned and bewildered. Also they might be anxious and grief-stricken, or even hostile. Hostility might reach the point of physical violence toward the rescuer at what might be interpreted as neglect of members of a victim's family in favor of other victims. It is, of course, obvious that medical supplies would have to be conserved. Vitally needed supplies and equipment ought not be depleted by ill-considered use on persons only slightly injured, or on those beyond medical aid.

In atomic attack the psychological factors would be increased because the populace would be unaware of the nature of the attack. In view of the psychological aspects of the problem, rescue personnel would require police power and weapons to enforce it. They would then also be empowered to prevent unauthorized use of vehicles in the disaster area and thus prevent interference with rescue operations. Pillage is, of course, a usual concomitant of disaster, and the measures mentioned would help prevent it.

Indoctrination programs should be instituted to reduce the psychological problems the rescuer probably would encounter. In the process of the indoctrination to prevent anxiety, consideration should be given to some of the misconceptions regarding the effects of irradiation. For example, contrary to the belief of some persons, acute radiation injury is not a communicable disease, nor does it cause the patient to be radioactive. Many people believe that it is possible for an object or person contaminated with radioactive material to render objects or persons in the immediate vicinity radioactive without actual contact. This is, of course, false, for contamination can only be the result of actual transfer of radioactive material from one object to another.

Cancer is thought to be an occasional sequel to periodic radiation exposure. There are little or no data to indicate an increased incidence of cancer among survivors of a single acute exposure, although it appears likely that the incidence of leukemia will be higher among the Japanese survivors than in the population as a whole.[11] Cataracts of varying severity have appeared in Japanese survivors; but the incidence to date is low. Sterility was rare and transient, and the incidence of abnormal offspring did not increase.

Radiation exposure is commonly thought to result in impotence. This is, of course, false. Such a condition can result from emotional stress in predisposed persons, and such stress is quite possible in the bombed population. However, the incidence of this condition among Japanese survivors was very low.

Education of the public, and proper indoctrination of rescue teams, will go far to diminish the psychological stress and the resulting deleterious effects of it following an atomic burst.

THE INDIVIDUAL CASUALTY

Diagnosis

It has been emphasized that blast and burn casualties will constitute the main problem. Careful evaluation of the burned or otherwise injured patient will be necessary, but the diagnostic problems are not new. However, since acute radiation injury has not been observed by many American physicians, and since its manifestations are, for the most part, delayed, it will present a diagnostic and prognostic problem.[7, 8] It is of value to decide what criteria are available to determine what persons have been irradiated, and to what degree.

Some information on dosage received can be gleaned from (1) the dosimeter reading, if available, and (2) the position of the person relative to the site of detonation. Dosimeters either on or in the vicinity of the individual will indicate the order of magnitude of dosage received. Knowledge of the position, if the kilotonnage of the bomb is known, will also permit estimation of dosage—a person in the open, 4,200 feet from the epicenter of a 20-kiloton bomb, would have received about 400 r, while a person at 5,200 feet would have received about 100 r. The size of the bomb can be approximated soon after the blast, and the distance-dose relationship should be available early.

Such estimations of dosage are excellent as a basis for over-all planning. As an accurate index of the probable fate of an *individual*, however, such estimations at present are of limited value. Dosimeters indicate the dose received by the instrument, which may be only a rough approximation of the effective dose received by the person in question. The position of an individual is obviously but a rough index of dosage received. Neither the dosimeter reading nor position take adequate account of the energy of the radiation, nor the degree of partial or total body-shielding of the individual; and, most important, the extreme degree of variation in response of individuals. Hence, neither the dosimeter readings nor position data should be used *by themselves* as the final index for triage, therapy, or prognosis. That is, there may be a vast difference between the presumptive diagnosis resulting from physical data and the diagnosis resulting from an over-all clinical evaluation of the patient's status.

The best appraisal of exposure, and degree of exposure is, as with any disease, an accurate clinical evaluation by the physician. A thorough evaluation can result only from a history (which includes any physical estimates of dose), a physical examination, and pertinent laboratory data. Symptoms suggestive of radiation injury include vomiting on the day of the bombing, oropharyngeal lesions, and hemorrhagic manifestations other than cutaneous purpura. Specific symptoms include epilation and purpura.[11] The presence or absence of the symptoms indicated previously (anorexia, malaise, diarrhea, melena, etc.) are of considerable value in appraising the status of a patient.

The degree of exposure can be estimated fairly accurately by the tempo of the disease. For instance, if vomiting on the day of the bombing proceeds without remission to other symptoms of the disease, exposure probably was severe and the prognosis is grave. If vomiting on the day of the bombing is followed by a remission, or if vomiting is absent

entirely, the probability of severe exposure is less and recovery is likely.

The clinical laboratory can provide data of inestimable value in early diagnosis and prognosis. Pronounced leukopenia is indicative of severe exposure, and a total leukocyte count of below 2,000 per cubic mm. of blood in the first week is indicative of very severe prognosis. A total lymphocyte count of less than 800 per cu. mm. two days after exposure is presumptive evidence of severe radiation exposure.[11] A significantly lowered absolute lymphocyte count within 24 hours is quite suggestive of such exposure.

Platelet counts remain stable for several days following exposure; however, a greatly decreased platelet count one week after exposure is indicative of severe overexposure. Anemia appears late, as much as two to three weeks after exposure; hence the erythrocyte count is not a good early index of damage. However, an increase in reticulocytes any time after exposure is a very good prognostic sign.

Treatment

It remains to examine what can be done for the patient with acute radiation injury. The treatment of this disease is at this time entirely symptomatic and supportive, and physicians in general have had no clinical experience with acute radiation injury. Nevertheless, intelligent care, even if only of a supportive nature, would salvage a great number who might otherwise die.

The severely irradiated patient should be put at complete bed rest as soon as possible after exposure. It has been shown with laboratory animals that repeated vigorous exercise considerably increases mortality.[9]

The use of antibiotics in the irradiated patient would probably be of definite value. Antibiotic therapy should probably await a clear-cut clinical indication for it. However, optimum dose schedules for man must await further clinical experience. Large doses probably would be needed to offset the lack of immune responses of the irradiated subject.

The value of transfusions in radiation injury is in doubt at this time. However, should transfusions be used they probably would not need be started until anemia was present, generally two weeks or more after exposure.

Adequate fluids and salts should be given to replace losses due to vomiting and diarrhea. The oral or rectal route should be used if possible; needle punctures would be hazardous because of the bleeding tendencies and the decreased resistance to infection of the irradiated patient.

The bleeding tendencies might be treated with protamine or toluidine blue. These are believed to combine with the heparin-like substances said to be present in the blood in excess concentration. Neither this mechanism of the hemorrhage nor the efficacy of this type of treatment has been established in man.

Vitamins C, P, rutin and various flavinoids have been suggested as being of some value in preventing capillary fragility. These are of doubtful value in preventing the hemorrhagic effects in the irradiated patient.

Oxygen may be efficacious in alleviating the tissue anoxia, which may be present in radiation injury.

A liquid diet should be used early. Later, a smooth diet should be given, since injured gastrointestinal tract mucosa will not tolerate even mild trauma.

Little benefit may be expected from iron supplements and folic acid. Several prophylactic agents such as cysteine, glutathione, and substances producing histotoxic anoxia (cyanide, thiouracil, etc.) have been found to be of value in animals if administered prior to irradiation. No such drugs have been tried for whole body irradiation in man, and at present there is no prophylactic agent of practical value for use in human beings.

U. S. Naval Radiological Defense Laboratory, San Francisco.

NOTE: *The California Civil Defense Authority created a State Radiological Safety Evaluation Board after this article was accepted for publication. This board in turn has created a series of Regional and Area Evalution Boards which are now in process of organization and rehearsal. These boards will be composed of radiologists and other persons familiar with radiation hazards, and will work in cooperation with local fire and police departments in the event of a bomb strike. Their work will be integrated with the Radiological Defense Division of the State Civil Defense Program.*

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The Rh Factor in Rural Practice

Responsibility of the General Practitioner

JAMES L. DENNIS, M.D., *Galveston, Texas*

SUMMARY

As the incidence of erythroblastosis fetalis is as high in rural as in urban areas, it behooves physicians in rural areas to anticipate the disease, to make special antepartum studies to determine the Rh status of obstetrical patients, and to be prepared to treat the affected baby if the aid of a specialist and special facilities are not obtainable.

Exchange transfusions have been carried out, by means described, in a small rural hospital.

ERYTHROBLASTOSIS fetalis, or hemolytic disease of the newborn due to Rh incompatibility between mother and fetus, is not limited to large medical centers. The emergency confronts physicians in rural areas.*

The incidence of erythroblastosis is usually given as one in 200 pregnancies,[8] and an affected baby has less than a 50 per cent chance to survive without treatment.

The purpose of this presentation is to review fundamentals which have practical clinical application to the management of Rh problems in rural practice, and to outline a plan for management which has been successfully used in a rural area.

GENETICS AND IMMUNOLOGY

All human blood may be divided into four main groups according to the presence, or absence, in the erythrocyte of one or both of the A and B agglutinogens. These are not the only antigenic substances which may be present in the erythrocytes in human blood, and among the others is the antigen called the Rh factor.

The Rh factor is inherited. It is a Mendelian dominant characteristic. The fetus will be Rh-positive if either parent contributes the dominant Rh-positive gene. If the same factor is in both chromosomes the person is homozygous; if otherwise, heterozygous. If a homozygous Rh-positive male marries an Rh-negative female, all the children will be Rh-positive. If he is heterozygous, half of the children will be Rh-positive and half of them Rh-negative.

In 85 per cent of persons (95 per cent of Negroes) the erythrocytes contain the Rh factor. These persons are Rh-positive. Conversely, 15 per cent do not have the factor and are called Rh-negative. It follows that exposure of an Rh-negative person to the antigenic Rh factor in erythrocytes of Rh-positive persons might stimulate production of Rh-antibody substances in the Rh-negative person. If this occurs, the Rh-negative person is said to be sensitized or iso-immunized.

There are two ways by which an Rh-negative female becomes sensitized: By receiving injections of Rh-positive blood, and by repeated pregnancies bearing an Rh-positive fetus. Pregnancy is a less potent immunizing factor than is injection of Rh-positive blood. There is in general a 1:30 chance that an Rh-negative woman will become sensitized.[7] There is only a 1:1,000 chance for immunization by pregnancy alone in the primipara but for the second and third pregnancies the chances are 1:40, and they increase to 1:12 for the fifth and sixth pregnancies. In contrast, antibodies develop in about 50 per cent of Rh-negative women with a history of blood transfusion. If this happens before the first pregnancy, it is likely the first child will have severe erythroblastosis.

ESSENTIAL LABORATORY TESTS

When there are no clinical laboratory services available, tests for the Rh factor and erythroblastosis can be reduced to two: Typing for the Rh factor, and the Coombs test. Rh typing identifies the Rh-negative mothers, and the Coombs test on cord blood of the infant is a diagnostic test for erythroblastosis. These inexpensive procedures physicians can do personally, preferably after observing them done in experienced hands.

While tests for Rh antibodies in the maternal circulation are desirable when laboratory help is available, they are not suitable as an office procedure.

Typing for the Rh Factor: One drop of commercial† anti-Rh serum is added to two drops of fresh blood being tested. These are mixed on the warm glass plate of an Rh view box and the plate tilted back and forth slowly. If clumping occurs, it is complete in one to three minutes. Agglutination means the blood is Rh-positive, no agglutination that it is Rh-negative.

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* In California in 1949 there were 157 recorded infant deaths attributed to erythroblastosis and only nine to syphilis. In 1949 the incidence of infant deaths due to erythroblastosis was the same in rural areas as in urban areas of the state.

† Materials used are available from American Hospital Supply, Lederle, Ortho Pharmaceutical, and others.

The Coombs Test: Two drops of Coombs' anti-human-globulin reagent (Ortho) is added to two drops of a 2 per cent saline solution suspension of washed erythrocytes being tested. These are mixed gently in a small test tube. If the cells are heavily coated with blocking antibodies, agglutination will occur almost immediately. If weakly coated, incubation at room temperature for ten minutes followed by slow centrifugation will cause agglutination. A positive result in the Coombs test means erythroblastosis; a negative result may not rule it out.

Although the significance of Rh antibody determination will be discussed, the techniques will not be described since they require a well equipped laboratory. In general, laboratory determinations made before delivery cannot be accurately correlated with the certainty of occurrence of erythroblastosis in the fetus or with the severity of the condition if it does develop.[6] Mothers of most severely affected infants usually have high antibody titres, yet many in whom sensitization is demonstrated deliver an unaffected baby.

There are two types of Rh antibodies. One is the agglutinin, or complete antibody, which in its specific reaction with the Rh-positive erythrocytes causes complete hemolysis of the cell. It is sometimes designated the "saline fraction," as it is demonstrated in a saline medium. The other, the blocking antibody, or albumin fraction, is sometimes called the incomplete antibody since it attaches to, or coats, the surface of the fetal erythroeyte without causing hemolysis. It can be activated to complete the hemolytic reaction by addition of an X-protein factor (conglutinin) found in human plasma or bovine albumin. The blocking antibody is thought by some investigators to protect the fetal erythrocyte it coats, since it appears to block direct hemolytic action of the circulating agglutinin.

MANAGEMENT OF OBSTETRICAL RH PROBLEMS IN RURAL AREAS

The suggested outline for management of obstetrical Rh problems in rural areas is based upon three possible situations depending on the presence or absence of laboratory and specialty help:

1. Management when neither laboratory nor specialty help is available:

(a) On the first visit a careful, complete obstetrical and transfusion history should be obtained.

(b) Rh typing of each obstetrical patient should be carried out. (Fifteen per cent will be Rh-negative.)

(c) The Coombs test should be applied to every infant born to an Rh-negative mother.

(d) If the Coombs test result is positive and criteria for a diagnosis of erythroblastosis are present, a blood transfusion for the infant must be considered. If possible, arrangements should be made for an interested pediatrician to treat the baby. Expense and time involved in bringing a specialist to the baby are often prohibitive. The same is true of transfer of the baby to a medical center, plus the fact that travel is hazardous for the baby. Another alternative would be to send the mother to a center to await delivery. This is usually impossible. Faced with these problems, the physician is likely to be left with a choice of attempting the transfusion or standing helplessly by with the infant's life at stake.

2. Management when laboratory but no specialty services are available:

(a) A careful obstetrical and transfusion history.

(b) All obstetrical patients should be referred to the laboratory for Rh typing and routine determinations of blood factors. Mailing containers may be used for sending specimens of blood to the laboratory.

(c) If the blood is Rh-negative, antibody determinations should be carried out. The presence of antibodies early in pregnancy usually indicates sensitization with carry-over from previous exposure to the Rh antigen.

(d) Titration tests should be repeated at the seventh month. If results are negative, no more tests need be done. If positive, titrations should be determined again at the eighth month. A rise in titre may be significant.

(e) The cord blood of infants delivered of Rh-negative mothers should be subjected to the Coombs test.

(f) Arrangements should be made for transfusion if it appears the procedure will be necessary.

3. Management when laboratory and specialty help are both available:

(a) Preliminary tests as previously outlined.

(b) Consultation with appropriate specialists to form a team prepared to carry out indicated therapeutic measures. (Rarely will this be possible in rural areas.)

It is not advisable in rural practice to induce labor early, or to carry out cesarean section in an attempt to minimize damage to the baby. Disadvantages of prematurity offset any advantage gained, especially when facilities for the premature are not ideal.

Efforts to prevent maternal antibody formation and to block action of the antibodies in the fetus have not been very successful. Some of the many agents tried are methionine, vitamin K, liver extract, progesterone, the hapten of Carter, cortisone and adrenocorticotropic hormone (ACTH). The latter three can possibly do harm and should not be used in rural practice.

SIGNS OF ERYTHROBLASTOSIS IN THE INFANT

The pathogenesis of erythroblastosis has already been touched upon. In some manner erythrocytes of the fetus reach the maternal circulation. If the mother is Rh-negative, she may be stimulated to produce Rh antibodies which pass easily into the fetal circulation where they may cause hemolysis of fetal erythrocytes. The fate of the fetus, depending on the degree of hemolysis, varies from intra-uterine death to being born alive only to have hemolytic

crisis follow. The demand to produce erythroblasts may be so great that immature nucleated cells (erythroblasts) appear in the circulation of the fetus. The liver, spleen, and other organs may assume erythropoietic functions. This leads to the greatly enlarged liver and spleen often observed in babies with erythroblastosis.

Clinically, the symptoms may be of one of three forms of the disease:

1. *Hydrops fetalis* is the most severe form. The baby has severe generalized edema, dome-like abdomen and huge liver and spleen. There is no effective treatment. The baby is usually born a month prematurely and, if born alive, soon dies.

2. *Icterus neonatorum* is the form in which the infant, at birth or soon after, has severe hemolytic anemia and jaundice. There may or may not be hepatomegaly and splenomegaly. The mortality rate for babies with disease of this type (untreated) is more than 50 per cent. Exchange transfusion has reduced this figure to as low as 2 per cent.[8]

3. *The anemic type* is the mildest form. The problem is that of severe anemia which may develop rapidly or be slowly progressive over a period of weeks. The mortality rate if the baby is not treated is around 25 per cent. Perhaps all babies with this form of the disease could be saved by adequate care.

Laboratory determinations supporting a diagnosis of erythroblastosis may be divided into (1) those present in the prenatal period, such as maternal antibodies and x-ray films in which the fetus is observed in a Buddha-like position with a halo shadow about the scalp due to edema; and (2) postnatal data, including a positive result of the Coombs test, less than 16 grams of hemoglobin per 100 cc. of cord blood, a ratio of more than five immature nucleated erythrocytes per 100 leukocytes, and bilirubin content of over 3.0 mg. per 100 cc. of cord blood.

MANAGEMENT OF ERYTHROBLASTOTIC INFANTS

In the management of an erythroblastotic infant, at birth the cord should be clamped long and the cord blood collected for a Coombs test, for hemoglobin determination and for cell study. The baby should be placed in an incubator with oxygen flow on. Since many erythroblastotic infants appear normal at birth but within a few hours have severe anemia and jaundice necessitating immediate transfusion, it is important to determine the hemoglobin content of the blood every six to eight hours the first day and daily for a few days thereafter. Injections of vitamin K and liver extract may be of supportive value. Prophylactic penicillin may be desirable. Theoretical danger of antibody transfer in breast secretions is no longer thought to be a contraindication to breast feeding.

There may be some risk in a small transfusion, beyond that of inadequacy, since adult serum in transfusion may contain sufficient activating substance (conglutinin) to precipitate hemolytic crisis by activating the blocking antibodies coating the red cells of the baby.[10] Exchange transfusion is more efficacious. The dangers must be looked upon as a calculated risk justified by the circumstances.

Exchange transfusion appears to be lowering the incidence of kernicterus and neurological sequelae as much as it is reducing the mortality rate. Intelligence ratings of children who recover from erythroblastosis are only slightly lower than the average.[4] It is so little lower that a physician has warranty for reassuring parents of infants recovering from the disease.

EXCHANGE TRANSFUSION

Factors to be considered in evaluating the status of an erythroblastotic baby are the hemoglobin value in the cord blood, the presence of jaundice, edema, respiratory difficulty, and neurologic abnormalities, the number of nucleated erythrocytes, and the degree of hepatosplenomegaly. There are no infallible rules, but in general exchange transfusion is probably indicated if any two of the following phenomena occur in a baby born to an Rh-negative mother: (1) Positive reaction to the Coombs test; (2) more than five to ten nucleated erythrocytes per 100 leukocytes; (3) hemoglobin content in cord blood less than 16 gm. per 100 cc.; (4) jaundice, or bilirubin content in cord blood over 3.0 mg. per 100 cc.

Infants who have erythroblastosis of the previously mentioned anemic type probably should have small transfusions (10 cc. of whole blood per pound of body weight). However, they should be given an exchange transfusion if respiratory distress develops concomitantly with a rapid decrease in hemoglobin and the number of erythrocytes in the blood.

Routine Rh-typing of obstetrical patients will have accumulated a list of potential Rh-negative donors. There are indications that a female donor is better for exchange purposes.[1] Group O Rh-negative blood which is compatible and shows no sensitization to the Rh antigen is acceptable. It is a probable choice in a rural community. Addition of commercial AB substance may enhance its safety. Fresh blood probably has some advantage over bank blood.

Procedure and Technique

Five hundred cubic centimeters of suitable donor blood is drawn. For exchange transfusion, catheterization of the umbilical vein of the baby is relatively easy during the first 12 to 24 hours. An 18 gauge polyethylene catheter (.067 inch outside diameter) is passed gently through the umbilical vein into the inferior vena cava until a free flow of blood is established. A blunt 18 gauge needle fits snugly in the open end of the catheter and is attached to two three-way stop cocks connected in series. Sterile tubing is connected to each valve, one leading to the transfusion set and the other to a waste receptable. Then 20 to 25 cc. of blood is withdrawn from the baby and discarded. It is replaced with an equal amount of transfusion blood, and withdrawal and replacement then are alternated until 500 cc. has been replaced. This is said to accomplish replacement of 85 per cent of the baby's erythrocytes. To prevent hypocalcemia and tetany due to large amounts of citrate in the transfused blood, 1 cc. of a 10 per

cent solution of calcium gluconate is injected after each 100 cc. of blood is replaced.[9] The apparatus should be flushed with saline solution to prevent clogging. Several syringes should be available. Some physicians advise the use of 0.2 cc. of heparin solution during the first half of the transfusion to prevent clogging.

The umbilical vein may thrombose early. If so, the saphenous vein technique is equally good[2] and is preferred by some investigators. A small incision is made one finger's breadth below the inguinal ligament, midway between the pubic tubercle and the anterior superior iliac spine. After the skin and subcutaneous fat are spread, the saphenous vein may be seen through a superficial layer of fascia. The vein is then isolated and ligated distally and opened gently with a needle or by small incision. The polyethylene catheter is introduced upward for a few inches until there is a free flow of blood. The catheter then is connected with the transfusion apparatus, as previously described, and the exchange is carried out. Replacement transfusion should be done slowly to avoid cardiac embarrassment. The venous pressure can be checked by placing a stainless steel millimeter rule vertically on the baby's xiphoid process and holding the plastic tubing against it. Normal pressures at the xiphoid process are not greater than about 6 cm. of blood. This refinement is not essential if three to four hours is given to doing the transfusion. There should be no hesitancy to discontinue the transfusion if, after infusion of a few hundred cubic centimeters of blood, the baby seems to be in distress.

The feasibility of such a procedure in a small community is illustrated in the following case reports:*

CASE REPORTS

Case 1. A 34-year-old Rh-negative white pregnant female, married to an Rh-positive husband, had had four previous pregnancies with these results: Miscarriage at three months; term delivery of a stillborn; delivery of a hydropic fetus at eight months; intra-uterine death at six months with maternal blocking antibody titre of more than 1:500.

At eight and one-half months she was delivered of a living female infant with hepatosplenomegaly and, within a few hours, severe jaundice and respiratory distress. In desperation, 450 cc. of Rh-negative, Group O blood was given as a replacement transfusion through the umbilical vein. The baby improved rapidly and at ten months of age was apparently normal.

Case 2.—A 24-year-old white female, Gravida II, gave a history of 76 hours in labor terminated by high forceps delivery of a living female infant that had severe "birth injuries" and lived a few months in a state of vegetation. The mother, critically ill with bilateral "milk leg," in an emergency transfusion was given a pint of Group O blood not typed for the Rh factor. (The patient had Group B blood.)

Upon the first examination in the second pregnancy (third month of gestation) the Rh-negative status was noted in routine Rh typing. Upon further study the presence of circulating agglutinins was noted. At the seventh month, agglutinating antibody titre was at 1:16 dilution and blocking antibody was up to 1:10. At term, cesarean section was done because the pelvis was relatively small and in light of the previous history. An apparently normal female infant was delivered. Positive reaction to a Coombs test of the cord blood was the only sign of erythroblastosis. However, jaundice began to develop within a few hours, and at ten hours the hemoglobin content of the blood was down to 10 gm. per 100 cc. and the number of erythrocytes had dropped from 4.5 to 3.5 million. An exchange transfusion was carried out. When attempts to get into the umbilical vein were not successful because of thrombosis, the saphenous vein technique was followed. There was progressive improvement after transfusion. Examined at five months of age, the baby seemed to be normal in all respects.

The first of the two case reports illustrates isoimmunization by pregnancy. In the second, sensitization undoubtedly was caused by a blood transfusion. Rh typing should be considered quite as important as blood grouping. No longer can infusions of whole blood without Rh typing be justified. This applies particularly to females before and during the age of childbearing.

Department of Pediatrics, University of Texas—Medical Branch, Galveston, Texas.

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* From the author's practice at Merced, California.

Insulin and Insulin Mixtures—NPH Insulin

DeWitt K. Burnham, M.D., *San Francisco*

SUMMARY

There are several distinct types of commercial insulins available, and with combinations of these many curves of timing of insulin action may be obtained, but none can parallel the action of a normal pancreas.

NPH insulin, the newest addition, has a wide range of usefulness and may supplant many of the other types and combinations.

SOME diabetic patients may be managed with weight reduction and diet alone; they may need exogenous insulin for short periods of emergency only. Others (approximately 50 per cent of all diabetic persons) need daily injections of insulin. It is the purpose of this discussion to review the types of insulin at hand with special emphasis on the newer NPH insulin.

No matter what theory of the action of insulin is accepted and no matter whether it is believed that diabetes is always caused by a diminished output of insulin from a sick pancreas or by a greatly increased demand for insulin due to overproduction of anterior pituitary and adrenal cortical secretions with final tiring and decompensation of the pancreas, certain facts are axiomatic. The output of insulin from the pancreas of a normal person not only varies from day to day but must vary by several hundred per cent from hour to hour with ingestion of food and physical exercise. This great variation of demand, reaching the pancreas probably both through the blood stream directly with changes in blood sugar levels and through the vagus nerve, is almost unique in the known endocrine system; it is paralleled only by the output of epinephrine (an insulin antagonist) during stress. In light of the sudden outpouring of insulin required after a high carbohydrate meal, the sudden shut-off of insulin as the blood sugar content falls, and the small continued amounts of insulin required to maintain the blood sugar at normal throughout the fasting hours of sleep, is there any wonder that a person with severe diabetes who takes insulin by injection once a day has a tremendous dosage problem?

Best has said, "We hope some day to make the 'ideal' insulin which will be liberated only on response to need so that hyperglycemia and hypoglycemia will be automatically controlled as in the non-diabetic." Today no such insulin is in sight. Furthermore, no matter what theory of the pathologic physiology of diabetes is accepted, it is now axiomatic that the deprivation of insulin, and not excessive carbohydrate intake, brings about glycogen depletion in the liver and causes the development of diabetic ketosis and subsequent acidosis and coma, as was pointed out by Mirsky[5] and others. High blood sugar levels and sugar in the urine are the result of too little insulin activity and are not the primary disease. A realization of these facts must guide physicians in the choice of the type of insulin and the dosage. Moreover, it must temper the desire to keep the patient always sugar-free.

In discussing the choice of the kind of insulin, and even the action of a given type in various patients, another important fact must be recalled. Diabetic persons who need insulin, although all different, fall into two distinct groups. In one group is the patient with diabetes of the mild, stable type usually observed in older persons. His mechanism of response to insulin demand is nearly normal although it cannot take care of the peak demands and eventually insulin debt and pancreatic decompensation will develop. A relatively small dose of any type of insulin will serve his needs. The strain will be off the pancreas and it will have periods of rest when the exogenous insulin carries the load, and will again be able to handle the postprandial peaks. Such a patient will seldom have an abnormal amount of sugar in the blood or have hypoglycemic reactions, and, as long as he keeps his weight down, will do well. In sharp contrast is the severe, brittle, usually young diabetic person whose endogenous insulin response to demand is extremely variable and completely unpredictable and whose exogenous insulin requirements are high. It is in this group that relatively large amounts of sugar are "spilled" even during periods of starvation (overnight); and, as Peck[9] has said, nocturnal hyperglycemia may well signify the existence of a much more serious and hazardous defect than the simple overflow mechanism of postprandial hyperglycemia and glycosuria. In such patients the insulin dosage is tricky, and even multiple injections and insulin mixtures may be ineffective at times.

DEVELOPMENT AND MODIFICATION OF INSULIN

Regular or amorphous insulin developed by Banting and Best[1] in 1922 was life-saving. In action it was potent and dependable. When given subcutaneously, it began lowering blood sugar levels within a period of minutes. The maximal effect was reached in three to four hours and was gone in six to eight hours. One dose a day was sufficient in many of the milder cases but it was soon learned that its action was not prolonged enough in diabetes of the more severe types, in which three to four injections a day

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were necessary. Many attempts were made to slow its action—giving it in an oil suspension was one such attempt—but it was not until 1936 that Hagedorn's modification of adding to insulin a buffered protamine obtained from the sperm of California rainbow trout proved really effective.[3] With that modification, the action lasted well over 24 hours. Later a small amount of zinc was added to protamine insulin by Scott and Fisher[10] to make it more stable and it was found that a single dose would actually carry over a three-day period, approximately 70 per cent being effective the first day, 20 per cent the next, and 10 per cent the third day. This fact is still important in adjusting the dosage of protamine zinc insulin (Chart 1). This new insulin with its slow prolonged action made it possible in many cases to obtain almost complete control of the disease with a single daily injection, and frequently with an actual saving of the number of units needed per day (Chart 2).

In the really brittle cases, however, the action of protamine insulin was too slow, and if enough was given to keep the blood sugar content normal during the day, night reactions were common. Two injections each morning, one of rapid-acting regular and one of protamine insulin, were necessary. Of course the next step was to combine the regular and protamine zinc insulin in one syringe; but at first this met with variable results,[4, 8] until the reason became apparent. Protamine insulin needs approximately 0.65 mg. of protamine per 100 units of insulin to saturate it but it was marketed as a supersaturated solution with 1.25 mg. of protamine per 100 units. So when regular insulin with its acid reaction was combined with neutral protamine in one syringe, even up to unit for unit, the surplus protamine in the solution combined with it to form a more slow-acting (and less dependable) mixture. As the ratio of regular insulin to protamine insulin in the mixture was increased past a 1:1, an insulin that gave rapid but prolonged action was formed.[2, 12] Adding say 40 units of regular to 20 units of protamine insulin produced the effect of 20 units of fast-acting and 40 units of prolonged-acting insulin for night carry-over, although the curve of action of the mixture actually was monophasic. These "tailor-made" mixtures of 2:1 and 3:1 came to be widely used.

Chart 1.—Action of one dose of protamine insulin (50 units) holding the blood sugar content down over 36 hours of fasting.

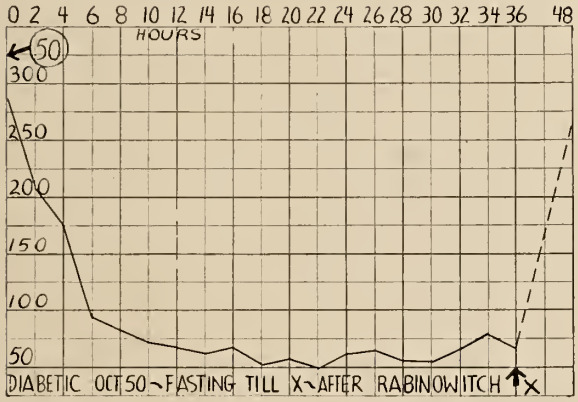
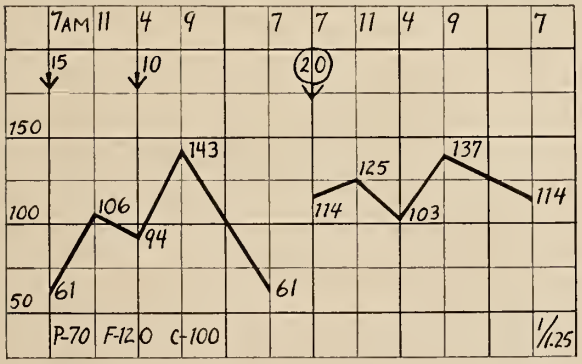


Chart 2.—Action of a single dose of protamine insulin (20 units) on pre-meal blood sugar level as compared with two doses of regular insulin (15 units before breakfast and 10 units before evening meal) with 20 per cent less insulin.



It should be mentioned here that during this transition time crystalline insulin was brought out. Although this is a purer form and therefore causes less allergic reaction, it differs from regular insulin so slightly in action that it may be assumed to be identical in timing.[8] Only economical and technical manufacturing problems keep it from replacing regular insulin on the market. Globin insulin with a maximum action in eight hours and lasting 18 hours[6] controlled some cases of diabetes, but because some patients who used it had afternoon shocks and high blood sugar levels in the morning, it was not universally acceptable and insulin mixtures held the field.

Mixing two insulins in one syringe each morning was a nuisance and for the more ignorant patients and those with poor eyesight was not always accurate. Hence, while the physicians were working out their own particular favorite mixtures, research workers and the manufacturing concerns were working on stable modified insulins, which would give similar results. Many types were tried over a period of years but finally one proved to be the most acceptable. During the period of development it was first called NPC50, then NPH50, and now it has come on the market as NPH insulin. As it is much like protamine zinc insulin in appearance, it is marketed in a square bottle with a distinctive label. This specially modified insulin is a neutral buffered suspension of protamine zinc insulin crystals containing approximately 0.50 mg. of protamine in isophane ratio to 100 units of insulin. It is quite stable. The name comes from: N for neutral, P for protamine, H for Hagedorn and 50 for 0.50 mg. of protamine. In action it is much like the 2:1 mixtures but it is more dependable and more efficient unit for unit. It has a fairly rapid onset of action (two to four hours) and has a good prolonged action of 24 hours or more, insuring an adequate overlap to the next day[7, 8] (Chart 3).

If these points are remembered it is quite easy to change patients to it. If the patient is well controlled on a 2:1 mixture, it is wise to reduce the total units given by 20 per cent the first few days he takes NPH and gradually increase the dosage if he "spills" sugar. As NPH may be a little slower in starting to act, there may be some spillage of sugar after breakfast; but this can usually be controlled by adjusting the diet so that carbohydrate intake at breakfast is reduced and compensated for at other meals. A bedtime feeding is usually wise (Chart 4). Patients with mild cases readily controlled with protamine zinc insulin need not be changed to NPH, but if a switch is desired it may be accomplished without trouble, again cutting the dose 20 per cent at first and watching for insulin shock in the afternoon. In some of the more brittle cases NPH insulin may still be too slow in action. If so, regular insulin may be added to it in one syringe and, as it is not supersaturated with protamine, each unit of regular insulin added will be effective and action such as that of 3:1 or 4:1 mixtures may still be "tailor-made."

Practically all patients taking NPH insulin value its simplicity and state that for some intangible reason they seem to feel better in general. Although there seems to be almost always a saving in the total number of units required daily when switching to NPH, this may be more apparent than real. It must be recognized that in the brittle cases an insulin reaction in the early hours of sleep may not be noted by either the patient or the physician and that such a reaction is frequently reflected in high blood sugar level the following morning. This fasting hyperglycemia then may be erroneously treated by arbitrarily raising the insulin dosage, with the result that the patient is taking far more insulin than is necessary, as was pointed out by Somogyi[11] and others. In such circumstances, if the patient is hospitalized

Chart 3.—Rapid but prolonged action of NPH insulin on the average blood sugar level of six patients (after Peck).

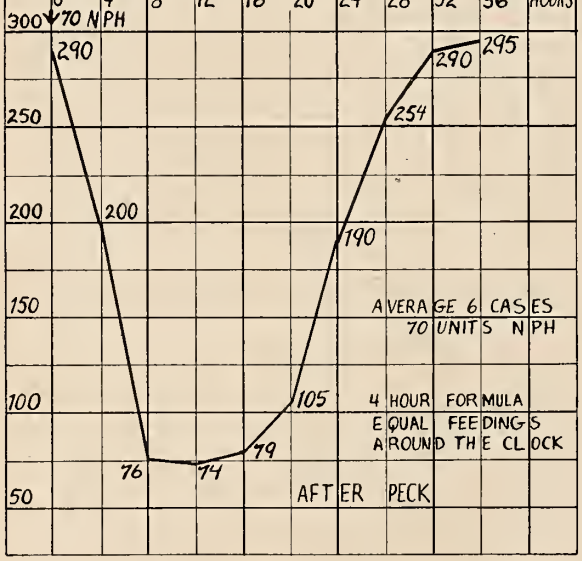
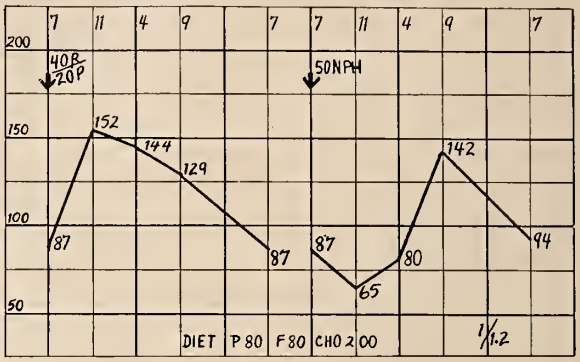


Chart 4.—Action of a single dose of NPH insulin (50 units) on the pre-meal blood sugar level as compared with an insulin mixture in one syringe (40 units regular and 20 units protamine) with 16 2/3 per cent less insulin.



for critical study, it may be noted in switching from one kind of insulin to another that control is obtained with considerably smaller dosage; and from this it may be assumed, falsely, that the kind of insulin to which the patient was switched is more efficient. In any case, NPH insulin is a big step forward and it may be prophesied that it will one day supplant protamine zinc insulin. Regular and/or crystalline insulin will always remain the insulin of choice for use in emergencies.

CONCLUSIONS

The normal pancreas releases variable amounts of insulin from hour to hour to control the ever-changing blood sugar levels. No kind of exogenous insulin in any dosage can possibly parallel this action. Regular or crystalline insulins act rapidly and for short periods. They are the insulins of choice for diabetic emergencies. Protamine zinc insulin bridges over the night but will not prevent postprandial rise in blood sugar levels in severe cases. Daily use of a combination in one syringe of two parts of regular and one of protamine insulin is the most useful insulin mixture.

The newer NPH insulin is a stable, efficient, modified insulin with action like that of the 2:1 mixture. When understood and used with perhaps minor changes in the diet so that carbohydrate intake is properly timed, it will replace all daily mixtures and in time may replace protamine zinc insulin.

Chronic insulin overdosage must be constantly watched for.

384 Post Street.

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Effectiveness of Smear Technique in Detection of Pulmonary and Gastric Cancer

H. Schuyler Aijian, M.D., and Bernadette Browell, B.S., *Los Angeles*

SUMMARY

In the initial use of cytologic examination of smears to detect pulmonary and gastric cancer at the Los Angeles County Hospital during the period April 1949 to June 1950, 350 patients with suspicion of pulmonary disease and 128 with gastric problems were studied. In the pulmonary group, 80 per cent of 51 malignant lesions were diagnosed by the smear technique. Sixty per cent of 15 neoplasms in the stomach were diagnosed by the method.

The results are analyzed in terms of sensitivity, accuracy, reliability and "yield" for the method. Cytological criteria of the presence of malignant disease are given and illustrated by photomicrographs.

The method is one of potentially great value as an aid to diagnosis. Use of it in examination of selected categories of patients seems warranted.

SINCE Papanicolaou and Traut[9] in 1943 revived interest in the cytological study of smears of body secretions for detection of exfoliated malignant cells, many investigators have demonstrated the usefulness of this method in the early diagnosis of cancer. The following presentation is a report on the initial routine use of the method at the Los Angeles County Hospital during the period April 1949 through June 1950 with regard to diagnosis of pulmonary and gastric cancer.

MATERIALS AND METHODS

Pulmonary Studies

Smear studies were made in 350 cases. The patients were from various services as follows: Tuberculosis, 56.8 per cent; medical, 26 per cent; surgical, 8 per cent; miscellaneous, 9.2 per cent.

The ideal study was considered to consist of at least two daily sputa following bronchoscopy (or else a series of five daily sputa), but many cases were studied much less thoroughly: Bronchial specimen and sputa, 52.2 per cent; single bronchial specimen only, 23.2 per cent; single sputum specimen only, 14.3 per cent; two or more sputum specimens, 10.3 per cent.

Smears were made directly from aspirated bronchial exudate if there was enough of such material, and if not they were made from material recovered from saline irrigations. Sputa varied in quality but early morning deep cough specimens were requested. During the period of this report, in an effort to build up the cytology service, no specimens were rejected as unsatisfactory. Therefore, many smears which were too thin or which for other reasons would not meet the present standards were included. (At present the general criteria for acceptability outlined by Graham and co-workers[15] are followed. Specimens of sputum that do not contain macrophages are rejected, as are bronchial secretions containing only a few columnar epithelial cells or with only erythrocytes and leukocytes.) In the laboratory, the usual techniques were employed—prompt fixation in alcohol-ether, and staining by the Papanicolaou-Traut method.[9] From three to five smears from each specimen were screened. Abnormal cells were evaluated by the criteria of malignancy as defined by Farber and co-workers.[3]

Gastric Studies

In most of the 128 cases in which smears of gastric material were studied, the patients were subjects for gastroscopy. Thirteen per cent of them were patients in the medical service, 12 per cent in the surgical service, 74 per cent in the gastroenterology clinic, and 1 per cent in other services. Ordinarily the specimen consisted of 20 to 40 ml. of thick mucus aspirated from the fasting stomach via Levine tube for routine gastric analysis preliminary to endoscopy. Smears were made from "fished" particulate matter or, when practicable, from centrifuged sediment. It was not generally necessary to use any adhesive.

As a rule, no pertinent clinical data were available at the time the smears were examined. Liebow and co-workers[6] held, in reference to pulmonary cases, that for a critical analysis of the method, the examiner should know nothing about the patient. Bryant and his co-workers[1] concluded, from a study of gastric aspirates, that this was an added hazard to accurate reporting rather than an aid to scientific honesty. The authors believe that strict adherence to cytological criteria of malignant process, without foreknowledge of clinical data, results in more accurate diagnosis.

REPORTING

If results of examination of smears were positive for cancer, the report given was, "consistent with malignancy." So far as could be determined, there

From the Department of Pathology, Los Angeles County Hospital.

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were no "false positives." Histological evidence of malignant lesion was present in all but two of the 36 proven cases of pulmonary cancer detected by smear (see under *Histology*). If results of smear examination were negative, the report was, "no malignancy." In cases in which "no malignancy" was reported and it was later determined by other means that carcinoma was present, the slides were reviewed. If previously overlooked malignant or suspicious cells then were noted, the original report was considered to have been "false negative." If no such cells were observed in reexamination, the diagnosis was considered "missed." "Inconclusive" was a noncommittal diagnosis; but included among the cases in which the smears were reported as "inconclusive" were some in which there were "suspicious" cells, implying that malignant disease was probable and that examination of additional specimens was important. If malignant disease was found to be present in a case in which the report was only "inconclusive," the result of the smear examination was tabulated as a "miss"; but if the term "suspicious" was used in the report, the presence of the lesion was deemed to have been "detected" by the smear technique. "Misses" in which there were recorded (but unreported) impressions of atypical and metaplastic cells have since been reviewed in terms of Papanicolaou's classification.[7]

The classifications used in the cytologic service of the Los Angeles County Hospital were matched with Papanicolaou's designations as follows:

Los Angeles County Hospital Classification	Equivalent in Papanicolaou Classification
Negative (unequivocally)	I
Negative (with atypical cells)	II
Inconclusive (with atypical cells)	III
Suspicious (probably positive)	IV
Positive (unequivocally)	V

As Papanicolaou's seemed superior to the system in use, it was adopted.

Of the 478 patients studied, 66 had tumors — proven in 49 cases. The 17 cases in which the presence of cancer was still unproven at the time of this report are included for purposes of discussion. Data indicating the sensitivity, reliability and accuracy of the method as it was employed in the period covered by this report are given in Table 1. Table 2 gives data for the separate and combined series (pulmonary and gastric) as to the grouping of the patients examined, sex, and age by decades. The kind of specimens examined is shown in Table 3.

TABLE 1.—*Data on Sensitivity, Reliability and Accuracy of Cytologic Diagnosis of Cancer*

	Total	Pulmonary	Gastric
SENSITIVITY			
Cases studied	478	350	128
Total tumors	66	51	15
"Detected" tumors	50 (75.8%)	41 (80.4%)	9 (60%)
RELIABILITY			
"Missed" tumors	14 (21.2%)	8 (15.6%)	6 (40%)
"False-negative" diagnoses	2 (3%)	2 (3.9%)	0
"False-positive" diagnoses	0	0	0

ACCURACY

Cytologic Report	Papanicolaou Equivalent		Total	Pulmonary	Gastric
"Consistent with malignancy"	V	Detected	38		8
"Inconclusive"	IV	Detected	3		1
"Inconclusive"	III	Missed	1		0
"No malignancy"	II	Missed	3		2
"No malignancy"	I	Missed	4		4

TABLE 3.—*Materials Examined in Attempt to Detect Pulmonary Tumors*

Material	% of patients giving Specimen	% of patients with Tumors	% of Tumors
Bronchial and sputa	52	12	43
One bronchial specimen only	23	21	33
One sputum only	15	12	12
Two or more sputa	10	16	12

TABLE 2.—*Data on Detection of Pulmonary and Gastric Cancer by Examination of Smears*

Service Treating Patient	Total Series			Pulmonary Series			Gastric Series		
	% from Source	% with Tumors	% of Tumors	% from Source	% with Tumors	% of Tumors	% from Source	% with Tumors	% of Tumors
Tuberculosis	43	5.3	15.8	59	5.3	21.5	....	....	....
Gastroenterology	20	3.2	4.5	....	....	....	74	16	100
Medical	23	30	52	27	29	55	13	....	....
Surgical	9	34	23	8	31	17.6	12	....	....
Others	5	4	4.5	6	15	5.9	1	....	....
Sex									
Male	65	17.2	82	70	18.8	90	54	11.6	53
Female	35	7.2	18	30	4.7	10	46	11.8	47
Age by Decades									
0-39	21	1	1.5	21	0	0	20.4	3.8	6.7
40-49	22	10.5	16.7	23	11.2	17.6	19.5	8	13.3
50-59	20.5	17.2	25.7	22	13	27.5	17.2	7.4	20
60-69	22.2	20.7	33.3	21	23	33.3	25	6.4	33.3
70-79	12.2	24.1	21.2	11	26	19.6	15.6	20	26.7
80 and over	2.1	10	1.5	2	2.6	2	2.3	0	0

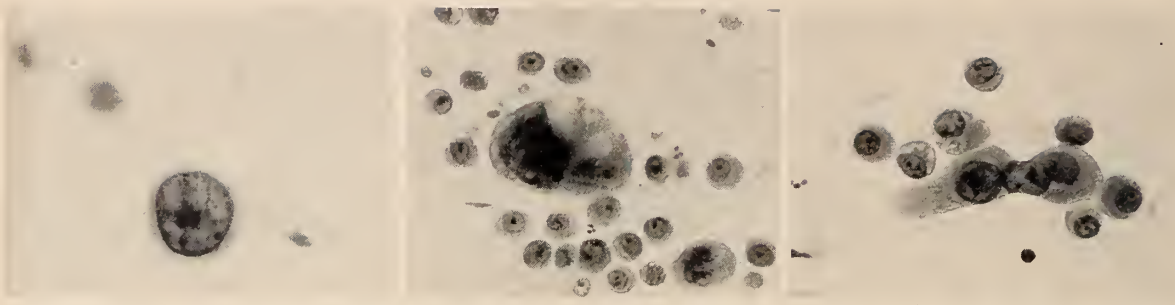

Figure 1. *Left*—A solitary huge malignant cell compared with the normal columnar epithelial cell. Note the nucleus-cell ratio (nuclear predominance), abnormal nuclear clearing ("moth-eaten") and large, abnormally shaped nucleolus. ×1100. *Center*—Multinucleated giant-cell. Note size compared to leukocytes, nucleus-cell ratio, multiple, irregular, crowded nuclei, abnormally large nucleoli, and huge cytoplasmic vacuole. Also note individual malignant cells whose nuclei vary in size, shape and contour with variation of the chromatin granules in size, shape, density and distribution. ×500. *Right*—A cell group. Note crowding, large nuclei varying in size and shape, with increased nucleus-cell ratio, prominent nucleoli, and clumping of chromatin. Also foamy cytoplasm. ×575.

HISTOLOGY

Histologic classification was possible in 46 of the 49 proven cases. The 34 pulmonary lesions are classified below. In one of the two instances in which the type of lesion was completely undetermined, the presence of the growth was proven by pleural metastasis and by x-ray and clinical evidence, and in the other a widespread nonresectable tumor was observed at thoracotomy (the biopsy specimen was lost).

Primary:

Squamous cell carcinoma	25
Adenocarcinoma	2
Unclassified*	5

Secondary:

Adenocarcinoma of pancreatic origin	1
Signet ring carcinoma, source unknown	1

The gastric tumors were adenocarcinoma with the exception of one of the lesions in the "missed" cases, which proved to be a reticulum cell sarcoma. Interpretation of impression smears from the cut surface of the tumor itself was impossible. In one case diagnosis was on the basis of observation, at operation, of a large inoperable posterior gastric tumor with carcinomatosis peritonei, without microscopic biopsy.

CYTOLOGY

Some mention of the most frequently noted features of the tumor cells might be helpful. Single malignant cells rather than groups were commonest among the predominantly squamous, pulmonary cases. However, groups were observed in cases of suspected and proven adenocarcinomata of both pulmonary and gastric origin. Well defined pulmonary types such as Graham's[15] differentiated "fiber" and "tadpole" cells were fairly common, but the most numerous were Graham's so-called "third type." These defy strict definition but they have multiple cytoplasmic and nuclear malignant qualities in varying combinations. Their order of importance among 20 cells photographed as typical examples follows:

1. Increased cell size and irregular shape	14
2. Increased size of nucleus in relation to size of cell (over 1:2 in cells larger than 10 microns)	12
3. Irregular nuclear contour	12
4. Hyperchromatism (especially with abnormally coarse, irregular, unequal chromatin granules, uniformly distributed)	12
5. Abnormally dense cytoplasm	6
6. Abnormal nucleoli	5
7. Vacuolated cytoplasm (not an independent criterion of malignancy, but of corroborative value)	3

The malignant features of exfoliated cell groups are more easily discerned. These were, in decreasing order of frequency, (1) variations in nuclear size, density, shape, and nucleoli; (2) clumping, distinguished by coherence of cells; (3) crowding with mutual deformity of adjacent cells; (4) cannibalism; and (5) malignant pearl formation.

The following examples were chosen for the cytological criteria of the malignant disease illustrated rather than for their clinical or critical value.

CASE REPORTS

Case 1. A 61-year-old white male with many previous hospital admissions for arteriosclerotic heart disease and pneumonia entered the Los Angeles County Hospital January 4, 1950, with signs of cardiac failure and pneumonia which did not clear. A productive cough was prominent. Body weight declined 20 pounds in the ensuing four weeks. In bronchoscopic examination on February 3, 1950, a thin, sharp, mobile carina was noted. The right main bronchus was normal and there was purulent material in the left. The mucosa was edematous and freely bleeding throughout and the capillary vessels were distended. There was thickening of the spur dividing the left secondary bronchi but report on a biopsy specimen from this area was negative for cancer. A definite pleural exudate was noted on February 7, 1950, and the patient was scheduled for thoracentesis, but died February 14, 1950, before this could be done. Permission for autopsy was given too late. (For cytologic features, see Figure 1.)

Case 2. A 57-year-old female entered Los Angeles County Hospital June 14, 1950, with complaints of bloating and epigastric fullness with constant pain for four months and ten-pound loss in weight in three months. In x-ray films a prepyloric defect was noted, and in gastroscopic examination a polypoid neoplasm was observed in the antrum on the greater curvature. In smears made at this time malignant

* In two of the five cases the report was "undetermined" from confirmatory biopsy—presumably anaplastic; and in the other three it was "highly anaplastic" at autopsy; "highly anaplastic" in lymph node biopsy, and "probable oat-cell carcinoma" on biopsy.

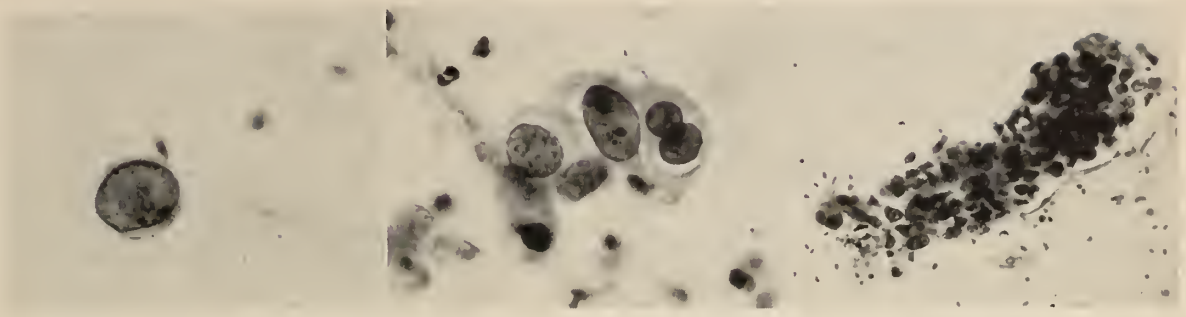

Figure 2. *Left*—A single huge cell compared with the small round cells. Note the nucleus-cell ratio, prominent nuclear membrane, and abnormally cleared areas associated with hyperchromatism, giving a moth-eaten appearance. ×1100. *Center*—Clumped cells. Note coherence, vacuolization, and abnormalities in nuclear size, shape, density, and distribution of chromatin granules. ×1000. *Right*—Large clump with evident coherence, crowding, vacuolization and many aberrations in nuclear details. ×440.

cells and cell-groups were noted (Figure 2). Subtotal gastric resection failed to eradicate a grade IV adenocarcinoma with metastases to regional lymph nodes.

DISCUSSION

Of the many analyses of smear cytology, comparatively few dwell on the clinical usefulness of the method in terms of diagnosis of the presence of pulmonary tumors. Watson and co-workers[16] studied 1,200 cases, in 236 of which there was bronchogenic carcinoma. Of the total 141 were detected by the smear technique, a "yield" of 8.5 per cent for the series. Farber and co-workers[2] reported positive diagnosis by examination of smears in 9.8 per cent of cases in a series of 2,066.

Liebow,[6] in a review of pulmonary cases, considered the omission of the large proportion of cases in which there was no cancer improper for a truly critical analysis. Not to enter this controversy, the present report is presented to show that worthwhile "yields" may be anticipated by this method applied to selected groups of patients. Its obvious limitations as a mass screening test, in comparison to chest x-ray, for example, have led many physicians to reject it as altogether valueless.

The demonstrable increase in pulmonary carcinoma,[12] 0 to 2.3 per cent from 1918 to 1946, and the virtually assured 2 per cent incidence of gastric cancer in patients examined postmortem in the Los Angeles County Hospital, emphasize the value of a test which, even when incidentally employed, detects cancer of the lung in 80 per cent of cases in which such lesions are present, and gastric cancer in 60 per cent. The results reported herein, admittedly fortuitous, and also those of more experienced workers,[13] indicate that with practice and conservatism, the one great hazard of false positive diagnoses may be practically eliminated.

Ferguson[4] expressed the opinion that false-positives should be expressed as a percentage of the total positive reports, rather than of the total series. Thus, three false-positive and seven true diagnoses out of 100 cases would be 30 per cent instead of the customary 3 per cent. This would appear to be simply a matter of definition of terms in a survey of essentially normal individuals, but in a practice in which many of the patients have non-cancerous disease characterized by atypical and metaplastic cells, such a classification seems unfair. The pathologist who must distinguish between the abnormal cells of bronchiectasis and those of malignant tumors is not faced with the simple dichotomy, is it cancer or is it normal? Rather, the problem is, is the abnormality malignant or is it benign? Lesions which may be biopsied only by expert endoscopists, if at all, may often be detected by examination of specimens which can be obtained without special equipment or skill and with a minimum of patient cooperation.

Graham and co-workers[15] expressed belief that sputum has distinct advantages over bronchial secretion: "The laboratory can exercise more rigid control over the preparation of the smear. Repeated specimens of sputum can be obtained with greater ease. Finally, patients presenting definite enough symptoms to justify bronchoscopy have, too often, far advanced disease."

Watson and co-workers[16] compared the 60 per cent accuracy of smears (112 sputum and 29 bronchial secretions "positive," out of 236) in bronchogenic carcinoma with 36 per cent "positive" biopsies on bronchoscopy (63 out of 176), and 86 per cent "positive" aspiration biopsies (85 out of 98). In 18 cases, seven of which proved operable, the preoperative "histological" proof depended upon cytology alone. In the series here reported upon, two cases were diagnosed by smear in the presence of "negative" biopsies, and the presence of malignant lesions was later proven by operation and autopsy. Herbut[5] reported a series of 118 cases of pulmonary carcinoma in which 32 (27 per cent) were detected by smear but missed on bronchoscopy. In the present series the results with sputum alone (14 per cent yield) appear poorer than with a single bronchial specimen alone (21 per cent yield). However, the disproportionately great number of patients with tuberculosis in the series (59 per cent) distorts the relationship. Later experience has led to the conviction that a series of at least five specimens of sputum is superior to bronchial secretions. The 80 per cent over-all smear sensitivity which the authors claim for a series including some histologically unproven cases is less than the 89 per cent of Herbut.[5]

about equal to the 80 per cent of Farber[2] and somewhat higher than the 60 per cent of Watson and co-workers.[16] Therefore, if 14.6 per cent of a selected group of patients harbor pulmonary tumors, of which 80 per cent are detectable by smears, prepared only incidentally in connection with another procedure and collected in part in an indifferent fashion, how much more valuable might this service become with increased ability on the part of the laboratory and increasing interest on the part of the clinician?

The difficulties in the cytological diagnosis of gastric cancer are suggested by Richardson's[11] observation that by using a cyto-histological preparation of gastric washings, he can distinguish acute, chronic and atrophic gastritis, ulceration and carcinoma. He reported an accuracy for carcinoma of 48.1 per cent with 3.9 per cent "false positive." Ulfelder and co-workers[14] successfully diagnosed, by smear, 12 out of 14 cases of gastric cancer proven at operation. Pollard and co-workers[10] reported that in a series of 278 cases in which there were 41 histologically proven neoplasms, they successfully diagnosed 35 per cent by smear, with 12 per cent indefinite. Bryant, Craig and Pollard[1] reported positive diagnosis in 41 per cent of 61 cases in which there was histological proof of cancer. In the present series the diagnosis of 60 per cent of the 11.7 per cent of malignant tumors in a selected group of patients is conditioned by the facts that in two cases anatomical proof was lacking, and one of the "missed" lesions was an undiagnosable reticulum cell sarcoma. It is apparent that much less accuracy and reliability is possible with gastric smears than with pulmonary. However, considering the simplicity of the test in comparison with gastroscopy and x-ray study, and the admitted unreliability of all three methods in establishing the malignant nature of a lesion, it seems reasonable to employ smear examination equally, as a source of corroborative information at least.

444 East 68th Street, New York, N. Y.

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Enuresis

Donald A. Charnock, M.D., *Los Angeles*

SUMMARY

Enuresis is a symptom rather than a disease. It may occasionally be the result of an organic condition but most cases are functional in origin. The organic cases are rather simply classified, the diagnosis should not be difficult, and the treatment is fairly well standardized. The functional cases, on the other hand, are of a variety of types which tax the physician and the family in understanding and treating the problem.

The author presents some of the known facts about enuresis and discusses the accepted forms of therapy. An important requirement is a better understanding and study of the child from the medical, psychological and environmental viewpoint. In this way a more rational therapy may be advised.

Enuresis occurs relatively frequently in children and occasionally in adults. By strict definition, enuresis is an involuntary discharge of urine. That this broad interpretation is followed by many authors and investigators is apparent from a survey of the literature. Without engaging in a discussion of semantics, it is obvious that some orientation must be undertaken before the subject can be profitably discussed.

The first step in an understanding of this problem is to review briefly the generally accepted physiology of urination. Nervous control of the bladder consists of a spinal reflex and a suprasegmental conditioning reflex. The normal stimulus for the reflex is the filling of the bladder until proprioceptive impulses have reached a sufficient threshold to produce discharges of the motor neurones, which results in voiding contractions of the bladder. The infant bladder is controlled by a simple spinal reflex arc synapsing in the sacral cord. As the infant develops into childhood, this purely uninhibited behavior of the bladder gradually comes under control of the suprasegmental mechanism and thus under direction of the higher centers. This integration should take place by the third year and it is at this point that the child should acquire control of the urine (Nesbit[12]).

If the broad definition of enuresis as an involuntary discharge of urine be accepted, then it is correct to postulate that anything which interferes with normal inhibitory control of the bladder should be classed as enuresis. Obviously this covers a large territory of conditions and some systematic classification is necessary to proper understanding of the problem.

CLASSIFICATION OF DISORDERS

In the first general division, it is necessary to differentiate between organic and functional enuresis. Many investigators would exclude from consideration as a part of the enuresis problem those cases in which there is organic cause of incontinence. It would be much simpler to agree with this premise. On the other hand, the finding of organic disease processes within the enuretic group may well explain the additional amplitude given to the stimuli which results in the suppression of the inhibitory mechanism, thus permitting the bladder to empty involuntarily by means of the spinal reflex.

At the same time it should be agreed that incontinence and enuresis are not equivalent terms. Incontinence is present in many disorders but is not a constant finding in all cases in which the disorders exist. Incontinence is usually considered as the overflow dribbling of a decompensated bladder which has lost the ability to function normally due to a breakdown of its neuromuscular mechanism.

If the organically caused cases be accepted as within the range of enuresis—and the author believes this is necessary in order to fully appreciate the problem—it is consistent to classify these cases as, urological, neurological, and general.

Urological disorders account for the bulk of the cases within the organic group. These have been studied and enumerated by many investigators. The excellent review by Campbell[3] presented the wide variety of lesions which extend from the external urinary meatus to the kidney. (The author's experience, in a more limited series, parallels the findings of Campbell.)

Neurological disorders may be any of a variety of conditions in which urination is not under voluntary control. Many of these conditions are true incontinence and should be excluded. Some may be classed as enuretic conditions.

General physical disorders are found in cases of enuresis. These may be gastrointestinal disease, nutritional disorders, acute infectious processes, and endocrine disturbances, to mention only a few. As Townsend[17] pointed out, "We must be on the alert lest some incidental abnormality be given etiological significance." It must be remembered that the enuretic child who has achieved control may undergo relapse during any illness.

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FUNCTIONAL DISORDERS

By far the preponderance of enuresis falls within the functional or psychogenic group. The variety of etiological factors and the wide range of classifications which fill the literature depends largely upon which psychiatric school of thought gives rise to them. Certainly all functional cases are not of the same degree of severity. Some attempt at clarification must be made.

A simple classification is that advanced by Townsend,[17] who divided this group into: (1) *Habit disorders*, (2) *conduct disorders*, and (3) those in which there are *psychoneurotic symptoms*.

The *habit disorder* is illustrated by the child who, through neglect and lack of training, does not mature at the average rate and clings to infancy instead of growing up.

The *conduct disorders* are those which, for example, exist in children who adapt enuresis as a means of defiance, hostility, and retaliation toward parents or siblings.

In the group with *psychoneurotic symptoms* are children who progress from the symptoms found in the habit disorders to obsessional and compulsive defenses. Such children often have changes in personality structure. Enuresis on this basis is by far the most serious and refractory. Boys in this classification often are weak, passive, infantile persons who usually remain effeminate and do not mix with other boys of their own age. Girls, on the other hand, are frequently active and aggressive, and in them enuresis represents a revolt against the passive feminine role. This probably accounts for the greater incidence of cure seen in girls with the approach of adolescence.

Enuresis is now considered by most investigators to be a symptom rather than a distinct disease entity. Thus, it takes its place as an important complaint in the review of a patient who has a complexity of conditions, be they organic or functional. For this reason, the history in such cases is of primary importance. How long has the child been affected? Has he ever established normal voiding habits? Is he enuretic during the day? Does he experience discomfort, or have difficulty, in voiding? Does the child react normally for his age to his surroundings, or is he emotionally retarded or abnormal? What is the emotional environment of the child, both with regard to parents and siblings? And, above all, what is the reaction of the parents to this problem? Are they interested, annoyed, overanxious, or just plain bored? All of these factors should be worked out in meticulous detail. In many cases, the history itself will give the lead which will make it possible to classify the child and open up the proper avenues of treatment. The importance of the history will be recognized when a few of the known facts about enuretic persons are considered.

Enuresis is of higher incidence in boys than in girls. It often disappears with adolescence. It is rare in adult women, but experiences in both of the world wars emphasize that the condition is present in adult males in greater proportion than might be suspected in usual practice (Shlionsky,[14] Levine,[10] Higgins,[9] and Cohen[5]). This is due, no doubt, to reticence in seeking medical advice for what is usually considered to be a childhood disorder.

Race and color have no significance. Enuresis has been observed in persons on all economic levels of society. In children, there seems to be no correlation with intelligence, although in the armed services enuretic adults seemed to be below average in educational and occupational background (Anderson,[2] Stockwell,[16] Campbell[3]).

There seems to be a familial tendency to enuresis, and siblings are often affected (Frary[7]).

Parental maladjustments as well as the parental attitudes toward the problem have a definite effect upon both the cause and the control of enuresis.

Depth of sleep has long been considered a factor. It is very difficult to evaluate. Most of the recent investigators discount the importance of variations in sleeping habits (Courtin[6]).

From the psychological viewpoint, it is well to remember that enuresis is a symptom which centers attention upon the child. The response by the child to the attitude of the parents is usually in direct proportion to their reaction.

As has been pointed out by Smith:[15] "More fears, jealousies, and worries are found among enuretic children than among others. On the whole, they get into more behavior difficulties and have more nervous habits than do dry children. We have no positive proof that the parents of bedwetters, as a group, are more lacking than other parents in those traits which endear them to their children, but clinical studies lead us to believe that this is true. It is the spirit that exists in the household that has most to do with producing dry or wet beds. Until a child feels inner security he is hard to cure and always ready to relapse."

EXAMINING THE PATIENT

Examination of enuretic children should be thorough. If an organic background is suspected, this avenue of approach must be carefully explored. In cases indicating urologic disease all portions of the urogenital tract should be scrutinized. This must include cystoscopy and regional x-ray studies (Campbell[4]). As greater proficiency in cystometry is developed, this may prove of value in cases involving bladder dysfunction. In cases falling within the neurological group, evaluation of these disorders may usually be accomplished by careful examination. In general disorders it is necessary to determine what part the illness plays in enuresis.

If the enuresis proves to be functional, then careful evaluation of the child must be undertaken. This must include a study of his environment, habits, personality, and his reactions and relationship to parents, attendants and siblings. A careful consideration of the parents with an insight into their background and psychological makeup is often necessary to fully evaluate the reactions of the child.

After the child has been surveyed from physical, emotional, and environmental viewpoints, it is possible to offer some advice which will help him to gain and maintain vesical control.

In cases in which organic processes have been found, these conditions must be treated and, if possible, cured. If the child has developed a habit pattern of enuresis during physical illness, this of itself may have to be treated once the organic lesion has been eliminated.

The simple routine of being "taken up" at night has "house broken" most children. How well and how intelligently this is done will be the index of success. This develops a conditioned reflex which, when integrated with the inhibitive suprasegmental mechanism, will usually result in normal toilet habits. Great care must be exercised in the early "breaking" period. All too often the seemingly frenzied desire on the part of the mother to get her youngster housebroken will result in psychological damage to the small child.

Investigators who have studied the enuresis problem have, from long experience, arrived at certain conclusions regarding the methods which have proved useful in establishing good toilet habits. First, the child must fully understand the problem and what is to be done about it. Second, he should take the initiative in planning the routine and carrying out the procedures. Third, he must have willingness to do it.

In the earlier years, the periodic awakening will need to be done by the parents. It is often helpful for the father to assume this responsibility. As soon as the child can get up by himself, arrangements should be made for him to do so. This may be accomplished by the use of an alarm clock, which the child should wind and set himself. The use of the Mower[11] apparatus, which causes a bell to ring as soon as a pad within the child's bed becomes wet with urine, may be helpful.

The child must be fully awakened before he goes to the toilet. Oftentimes this requires various stimuli such as a period of play, brushing of the teeth, or even a bath. Sometimes rewards are useful. As the child becomes interested in the game of getting up and going to the toilet, his response will increase.

The child should make the trip to the bathroom by himself. This will increase his own response to the training and make him feel that he, himself, is playing the major role in this new game of staying dry.

All of these aids and routines depend largely upon the child's own desire to stay dry and the feeling that this is being carried out through his own initiative and effort. The more this training period becomes a game, the quicker will it produce results. The attitude of the parents should be that of interested spectators, ready to praise when there is success and never condemning when there is failure. The use of a calendar with gold stars for dry nights is in keeping with the game-reward idea, which is infinitely more successful than punishment or harsh words.

Drugs have been used for centuries to induce children to remain dry. At about the time Columbus discovered America, bed wetting was being treated by "the scattering of dried and tricturated cock's comb on the bed of the bed wetter without his knowledge" (Seelye[13]). A multitude of remedies has been used. The success of these is in direct proportion to the degree of confidence the child develops in himself and in his counselor or physician and in the massive doses of suggestion that accompany the drugs (Campbell[3]).

Atropine is the most widely used drug and is usually given for its antispasmodic effect. Pharmacologically it is indicated only in cases of parasympathetic imbalance, where the emptying mechanism of the bladder is in control. Amberg[1] has shown that atropine may reduced the height and rate of vesical contractions, thus allowing the bladder to retain more urine. It is conveniently administered as tincture of belladonna and should be used until the physiological effects of atropine, flushing of the face, acceleration of the pulse or dryness of the throat occur. Atropine is contraindicated in cases of sympathetic imbalance in which the bladder is atonic and the sphincter is not relaxed.

With the thought that depth of sleep was an important factor, some investigators have used stimulating drugs such as caffeine and, more lately, Dexedrine.® These should be employed with caution.

The use of sodium chloride before bedtime is based on the theory that concentration of the urine will make bedwetting less likely. Its irritating effects upon the stomach and the increase in thirst following its use should be sufficient cause for its abandonment. It is still being widely used with little results.

Limitation of fluids during the evening seems quite logical. A relatively dry, easily digested supper, with avoidance of such fluids as tea, coffee, and even chocolate, has been prescribed for generations. This is an empirical prescription; there is little scientific basis for it.

As enuretic children often void more frequently during the day than other children, it is well to encourage them to hold the urine as long as possible during the daytime. There is some evidence, not very scientifically established, that enuretic children have a smaller bladder capacity than normal children (Hallman[8]).

For cases of enuresis which persist into adult life, more exacting treatment is required. In many instances an organic basis will be noted, and treatment by a urologist or neurologist may be indicated. If there is no organic cause for the enuresis, careful psychiatric treatment is usually necessary.

Scientific medicine is not growing simpler. As each new problem arises, physicians must expand the horizon of knowledge to meet the changing order. The enuretic child has received all too scant attention. Physicians have been content to rely mainly upon the approach of adolescence for the cure of this distressing symptom.

To the author it seems that no one is in a better

position to help enuretic children than the family physician. He knows their background. the family problems, the history of the child, often from its birth. No one may so easily gain the confidence of the child and of the parents. At times he will need the aid of ancillary services. Often by his own wisdom. tact and patience, he can help these unhappy children to resolve their problems and to guide them from the wet nights of babyhood into the exciting days of adolescence.

727 West Seventh Street.

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Primary Postpartum Hemorrhage

George F. Melody, M.D., *San Francisco*

SUMMARY

Postpartum hemorrhage is the outstanding cause of maternal mortality, and a redoubtable contributor to puerperal death from other causes, notably infection and renal failure. The clinical situations in which hemorrhage is liable to occur must be better known, so that anticipatory and preventive measures can be taken. Recent knowledge about defibrinated blood in women with degenerative changes at the placental site must be incorporated in the thinking and practice of physicians dealing with obstetrical cases. The indications, limitations, and hazards of the various anesthetic methods available for parturient women should be carefully considered in the circumstances of each case.

PRIMARY postpartum hemorrhage is excessive bleeding from the genital tract during the first 24 hours after birth. A blood loss in excess of 600 cc. is usually regarded as hemorrhage. The bleeding may occur before or after the third stage of labor is completed. Although the blood loss is usually external, in certain instances it may be more or less concealed. The bleeding may be sudden and furious, erratically repeated, or a slowly exsanguinating trickle. It may follow spontaneous or operative vaginal delivery, cesarean section, or cesarean-hysterectomy. Postpartum hemorrhage occurs in approximately 5 per cent of all deliveries. Puerperal hemorrhage after the first 24 hours is known as *late postpartum hemorrhage* and has been considered elsewhere.[6]

There are both immediate and delayed hazards in postpartum hemorrhage. The immediate threat is death from loss of blood and irreversible shock. Delayed complications are puerperal infection, transfusion reactions, renal failure from lower nephron nephrosis or cortical necrosis, thromboembolic disease, and finally, Simmonds' disease, or pituitary cachexia.

Most cases of postpartum hemorrhage can be anticipated, more can be prevented, and all can be treated. No woman should die of hemorrhage, the number one cause of maternal mortality, and a formidable contributor to puerperal death from other causes. The best treatment for postpartum hemorrhage is its anticipation and prevention. The several major causes of postpartum hemorrhage, although generally known, are here considered in the light of present knowledge:

Uterine Atony

Myometrial exhaustion, or what is more commonly called uterine atony, is undoubtedly the most frequent cause of postpartum hemorrhage. The usual predisposing factors are prolonged or precipitate labor, overdistention of the uterus, antepartum hemorrhage, deep anesthesia, and mismanagement of the third stage. Prolonged labor is usually owing to cephalopelvic disproportion, to uterine inertia, or to the premature and injudicious use of analgesics or conduction anesthesia. Cephalopelvic disproportion should be recognized in good time, and never permitted to eventuate in desultory labor. Primary inertia should be treated by support and stimulation, in contrast to secondary inertia which should be managed by rest and sedation. Labor can be prolonged many hours by starting continuous caudal analgesia prematurely; labor can be brought to a complete standstill for hours by the untimely administration of "terminal" spinal anesthesia. Postpartum bleeding is almost inevitable after the relaxation induced by deep anesthesia, particularly ether. Uterine atony follows precipitate labor just about as often as prolonged labor; and one should be cautious about the induction of labor, as induced labor is often prolonged or precipitate.

Overdistention of the uterus from multiple pregnancy, hydramnion, or excessively large fetus, is notoriously liable to be followed by postpartum hemorrhage. In such circumstances, the uterus should be decompressed slowly and general anesthesia used cautiously. Cross-matched blood should be in readiness.

Trauma of Delivery

Injury to the uterovaginal tract continues to be a major cause of postpartum hemorrhage. The anatomical lesions are cervical and vaginal lacerations, including rupture of the vagina, paravaginal hematomas, and rupture of the uterus. With most of these accidents the bleeding is external, in contrast to the more or less concealed hemorrhage which occurs with ruptured uterus and paravaginal hematomas. The external bleeding is typically a slow, steady trickle of bright (arterial) blood, in distinction to the darker blood which escapes from the placental site. The possibility of these complications should be thought of after precipitate delivery, after difficult obstetrical maneuvers, and with the parturition of elderly primiparae.

Laceration of the cervix is inevitable if delivery is attempted through an incompletely dilated os. Manual or digital completion of dilatation has no place in modern obstetrics; if conditions are propitious for vaginal delivery except for a persistent

From the Department of Obstetrics and Gynecology, University of California School of Medicine, San Francisco.

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remaining ring of cervix, Dührssen's incision should be made. The first clue to a contracted midpelvis may be brisk bleeding from puncture wounds over prominent ischial spines. Lacerations of the vaginal vault are not uncommon after breech extraction, forceps rotations, and the inept use of Kielland forceps. A rotary or torsion force may actually rupture the vagina (colporrhexis) by creating a circular tear around the cervix, usually in the posterior fornix, which communicates with the peritoneal cavity. The bleeding with colporrhexis is usually furious because of laceration of the internal pudendal, middle hemorrhoidal, or vaginal artery. No woman should be returned to bed if there is a steady trickle of blood. The cervix and entire vaginal vault should be inspected if there is suspicion of trauma. Sometimes a physician has to rely on tactile sense to locate a laceration which is hidden by the invagination of its edges. Lacerations should be visualized (or palpated) and promptly repaired. A gently placed vaginal pack is often adequate for superficial abrasions, but if the vagina is packed too tightly bleeding may be aggravated by forcing the ends of the severed vessel apart; moreover, overpacking the vagina may cause neurogenic shock. In rupture of the vagina, if hemostasis cannot be obtained per vaginam, ligation of the hypogastric artery may be necessary.

Vulvovaginal and paravaginal hematomas are not uncommon and are usually not preventable. Backbleeding from a retracted submucosal vessel in the episiotomy or a laceration is the usual mechanism. By starting the repair two centimeters above the apex of the episiotomy or laceration, the likelihood of "missing" a submucosal vessel is lessened. Hematomas should be recognized early, evacuated, and bleeding points secured. If the process is left to nature, the extravasation of blood may extend past the broad ligament to the lumbar plate.

Traumatic rupture of the uterus occurs much more often than vital statistics would indicate. Deaths attributed to "obstetrical shock" are often due to unrecognized or disavowed rupture. Rupture should be thought of after every difficult forceps delivery, version and extraction, and breech extraction.[2] If there is any doubt about the integrity of the uterus, manual exploration should be done. If rupture is noted, the uterus should be packed, and a continuous transfusion given until arrangements are completed for laparotomy. Hysterectomy is necessary in about half of such cases, although in many instances the uterus can be saved by repairing the rent.

Errors of the Third Stage

More women die during the third stage of labor than during the first two stages combined. Proper management of the third stage is perhaps the obstetrician's greatest responsibility. The third stage is all too often the fatal climax of a neglected first stage and a traumatic second stage worsened by the effects of injudicious anesthesia. Full description of the proper management of the third stage cannot be undertaken here, but this much should be said: The conduct of the third stage should begin during the second stage by the deliberately slow delivery of the fetus to allow time for the uterus to accommodate itself to its diminished volume and thus peel off the placenta in a physiological manner. The Credé maneuver is dangerous and obsolete. No attempts to deliver the placenta should be made until it has separated, and the fundus is firmly retracted. Squeezing or kneading the uterus traumatizes the myometrium, dislodges thrombi from the placental site, and invites inversion. If and when deep anesthesia is used, it should be stopped the moment the fetus is delivered. Mismanagement of the third stage of labor was responsible for four out of seven cases of acute or subacute inversion recently reported from the Sloane Hospital for Women.[4] Vigorous bleeding at any time calls for immediate extraction of the placenta. In addition to massage, bimanual compression, and use of oxytocics, manual exploration should always be done if bleeding persists after the placenta is out, and it should be done before a tampon is placed. Retained placental tissue, a submucous myoma, rupture or inversion may be noted.

An emergency unit of type IV(0), Rh-negative blood should be kept refrigerated on every lying-in suite. The equipment necessary for laparotomy should be immediately available in or adjacent to the delivery pavilion. It is well to transfer postpartum women to a recovery room for the first 24 hours, so that they may be observed constantly by competent personnel. This would do much to prevent serious secondary relaxations, and the "floodings of the newly laid women."

Defibrinated Blood

Thanks mainly to the Boston group of obstetricians, more and more is being learned about the development during pregnancy of conditions making the blood incoagulable. Many physicians have observed cases in which the patient bled to death because the blood had lost the ability to clot. Hemorrhage not only from the placental site, but from surgical incisions, venipunctures, and even from the nasopharynx has been observed; and in such instances death may have occurred despite heroic measures, including ample blood replacement and hysterectomy. Since the report of Maloney and his associates[5] in 1949 a significant literature has accumulated on the subject of acquired afibrinogenemia of pregnancy. It is now known that whenever there is necrosis or degeneration at the placental site, there is a chance that particulate matter, thromboplastin, toxins, and anticoagulants can be absorbed into the maternal circulation. In extreme cases the woman's blood may become totally defibrinated and quite incoagulable. The hematologic findings include critically low values for fibrinogen and prothrombin, and often a circulating fibrinolysin is present. A sample of such venous blood when incubated will either not clot at all, or else the clot will be so fragile that the slightest vibration will cause it to disintegrate. When the plasma fibrinogen level is reduced from

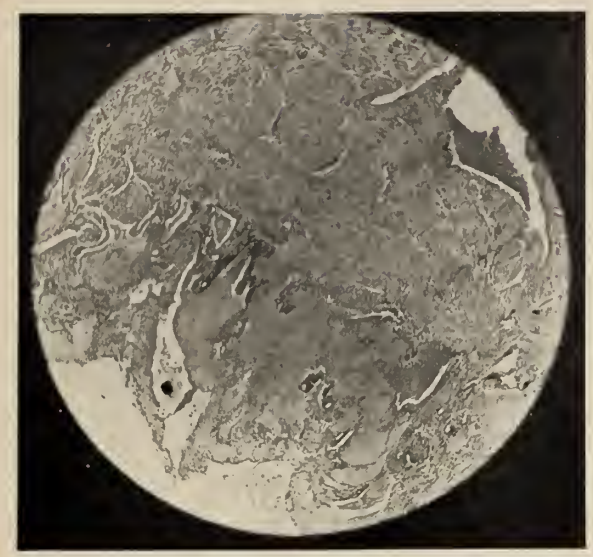

Figure 1.—Placental site six hours postpartum. Hysterectomy done for intractable hemorrhage due to afibrinogenemia. Note sinuses filled with liquid blood. × 17.

the normal concentration of 0.5 gm. per 100 ml. to 0.2 gm. per 100 ml. the circulating blood is incoagulable.

It is now known that abruptio placentae, fetal death in utero, toxemia of pregnancy, and sometimes placenta praevia may be associated with defibrination of the maternal blood, depending upon the absorption of anticoagulants into the circulation. Women with these complications should be studied hematologically as well as obstetrically. In addition to replacement of whole blood, specific deficiencies of fibrinogen and prothrombin must be eliminated if uncontrollable postpartum hemorrhage is to be averted. Fibrinogen in the form of Fraction I, from which the virus of homologous serum jaundice has been removed by nitrogen mustard, is packaged in flasks of 2 gm. (2,000 mg.), and may be dissolved in 300 to 500 cc. of 5 per cent glucose or normal saline solution for intravenous administration.[3]

It is important that a uterine bag, or metreurynter, not be used in such cases. A uterine bag makes a closed system, so that when contractions begin, particulate matter, break-down products and anticoagulants are swept into the maternal sinuses, thence into the circulation, with risk of sudden death from amniotic fluid embolism, or aggravation of the incoagulable blood status. Simple rupture of the membranes, and the draining off of amniotic fluid with its noxious compounds, is a rational precautionary measure, and should be done when feasible.

In a recent case in which antepartum fetal death occurred at six months due to the Rh-factor, afibrinogenemia developed in the patient during the four weeks that the dead fetus was carried in utero. In examination of the specimen obtained at hysterectomy, which was six hours postpartum for intractable hemorrhage, unclotted blood in the placental sinuses was observed (Figure 1), and there were extensive degenerative changes in the trophoblastic-

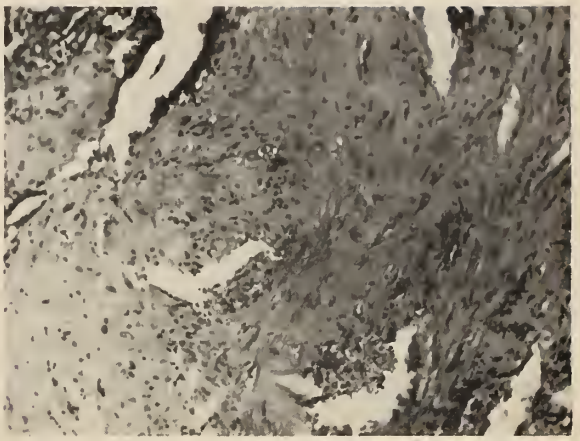

Figure 2.—Decidua basalis of same specimen as Figure 1. Note extensive necrosis of the decidual cells and round cell infiltration. The dead fetus had been carried in utero for four weeks prior to delivery. × 43.

decidual junction (Figure 2), the source of the anticoagulants. Even though the placenta had been implanted high in the corpus the patient was admitted in early labor with prolapse of the placenta, no doubt due to the combined effects of necrosis of the placental site plus Braxton-Hicks contractions. In microscopic examination of the placenta (Figure 3) endarteritic obliteration of the villous vessels and atrophy of the chorionic epithelium were noted. Venous blood drawn at the time the patient was admitted to hospital did not clot even after five days.

Antepartum Hemorrhage

Antepartum bleeding predisposes to postpartum hemorrhage. The value of prophylactic blood transfusions in cases of placenta praevia and abruptio placentae was emphasized as long ago as 1919 by Bill[2] of Cleveland. The vicious circle of bleeding followed by uterine relaxation, followed by more

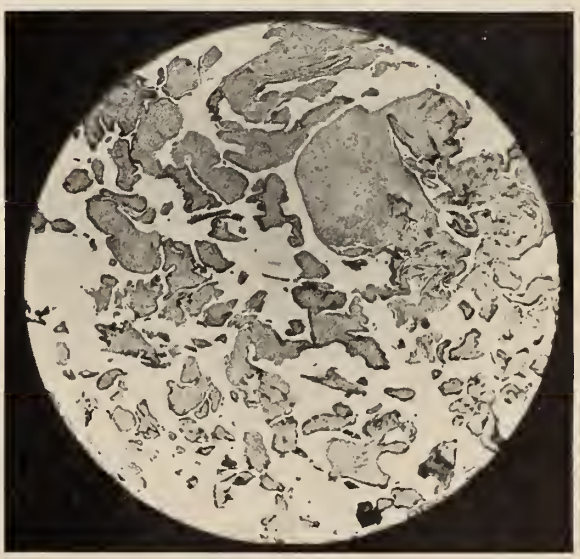

Figure 3.—Chorionic villi from same case as Figures 1 and 2. Placenta gradually became detached and eventually prolapsed. Note disappearance of chorionic vessels and epithelium. × 100.

bleeding until irreversible shock sets in, should be anticipated, and never permitted to occur. Blood lost antepartum should be replaced antepartum or intrapartum to prevent postpartum hemorrhage.

The interests of mother and fetus will best be served in cases of placenta praevia and abruptio by ample blood replacement, and simple rupture of the membranes, or cesarean section, depending upon the particular case. The author regards the use of dilating uterine bags as dangerous in either complication. In both conditions there is the risk of amniotic fluid embolism and of provoking the defibrinated blood syndrome. In placenta praevia there is the added hazard of furious postpartum hemorrhage from a laceration of the friable cervix or bleeding from a sinus in the placental site due to the trauma of a dilating bag. A bleeding sinus in the lower segment encountered at cesarean section can be visualized and transfixed. In both placenta praevia and abruptio placentae, hysterectomy is occasionally necessary as a life-saving measure.

Toxemias of Pregnancy

Postpartum hemorrhage should be anticipated in all cases of "toxic" pregnancy, for the following reasons: (1) Vasomotor collapse with consequent uterine atony and hemorrhage frequently follows delivery in such cases, for the vasomotor response to emptying the uterus is unpredictable. Therefore, spinal and general anesthesia should be avoided; local infiltration is preferable. (2) Often in "toxic" pregnancy there are degenerative changes at the trophoblastic-decidual junction, and the risk of defibrinated blood is considerable. (3) As was first pointed out by Slemons[8] in 1933, in toxemia of pregnancy the myometrium may be diffusely infiltrated with intermuscular hemorrhages identical with those observed in cases of abruptio placentae. A uterus thus affected may not retract postpartum, and hysterectomy may have to be done. In the case reported by Slemons, hysterectomy was necessary nine hours after cesarean section, because of repeated severe hemorrhages due to a blood-infiltrated myometrium.

Uterine Tumors

Uterine neoplasms are only rarely a cause of postpartum hemorrhage. Multiple intramural myomas or extensive adenomyosis[9] may interfere with proper retraction. More important, however, is a submucous myoma which has undergone red degeneration. Such a myoma can become agglutinated to the placenta, and prevent its complete separation in the third stage. If, upon inspection of the delivered placenta, a clean, punched-out defect is noted, a submucous myoma should be suspected and manual exploration carried out. Exceedingly rare causes of postpartum bleeding are cervical carcinoma, cervical polyps, ectopic decidua[7] which may involve the cervix, and hemangioma of the uterine wall.

Cesarean Section and Cesarean-Hysterectomy

Postpartum hemorrhage is a major cause of death following cesarean section. It is probable that the blood loss frequently amounts to between 500 and 1,000 cc. The sources of bleeding are the uterine incision, including transection of the uterine vessels on one side, unrecognized uterine rupture, and the placental site. If the placenta is attached to the defective scar from a previous cesarean section, the bleeding may be furious and intractable; Slemons[8] advised hysterectomy in such instances.

Hemorrhage should be anticipated in every cesarean section. There should be a functioning venoclysis with a No. 18 gauge needle started before the anesthetic is begun. In addition to preoperative blood replacement there should be a unit of crossmatched blood available in the operating room for even the "routine" case. If the operation is done for antepartum hemorrhage or toxemia, spinal anesthesia should be avoided because of the inherent risk of hypotension. Loss of blood will be reduced if the surgeon uses local infiltration. The placental site should be spared the trauma of rough sponging and the suction tip. Blood will be saved and morbidity reduced if myomectomy is avoided. In event of intractable bleeding from profound atony, placenta praevia, abruptio with uteroplacental apoplexy, rupture or perforation (from "failed forceps"), hysterectomy may be necessary.

The author has observed two cases in which the patient underwent cesarean-hysterectomy and several hours after operation lapsed into severe shock from internal hemorrhage. The increased vascularity of the pelvic structures in the pregnant state makes cesarean-hysterectomy a formidable undertaking. All vascular pedicles should be doubly ligated, as the risk of a major vessel's retracting is considerable. A progressively falling volume of erythrocytes as determined by hematocrit is the best laboratory indication of internal hemorrhage. If the physician is convinced there is continuing bleeding it is mandatory that he reopen the abdomen. Total hysterectomy is fraught with special hazards in the pregnant state, and, like all surgical operations during gravidity, should be avoided unless really necessary. Bleeding from the vaginal cuff and internal hemorrhage from vascular pedicles are calculated risks from this operation.

490 Post Street.

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Discussion by DONALD W. DECARLE, M.D., *San Francisco*

To me, there is but one obstetrical complication in the presence of which I must, at times, admit to actual panic. That complication is postpartum hemorrhage. This is particularly true in the presence of bleeding which one can not only see but also hear. I have known men far more experienced than I to be so completely unnerved in its presence that clear, sound judgment is lost. It is the complication which must always be feared as long as it is potentially present at every delivery.

As a subject for discussion, it has, therefore, been wisely chosen. It can never be exhausted as long as it leads the list of fatal complications in the field of obstetrics. As Dr. Melody has pointed out, in order to combat postpartum hemorrhage, one must be conversant with every phase of the conditions underlying it. This necessitates routine and frequent rechecking of the blood throughout every pregnancy. Potential or actual anemia as distinguished from the physiological hydremia of pregnancy can be recognized and properly treated before the onset of labor only by such a method. I deem this most important, since it can mean the margin of difference between life and death in the event of postpartum hemorrhage. The practice of placing the patient on iron therapy without such a routine hemoglobin evaluation only creates a false sense of security. It should be severely condemned.

For the most part, I agree wholeheartedly with Dr. Melody. However, in the matter of handling the third stage of labor, I still feel that the Credé maneuver, when properly carried out, is a valuable procedure. If one's hand is on the fundus during the third stage, certainly there is far less chance of the uterus' filling with blood concealed behind an undelivered placenta. The same is true of the Credé maneuver when an oxytocic agent is employed at the onset of the third stage. Otherwise, the placenta may become incarcerated.

Dr. Melody has very definitely changed our way of thinking on at least two points. In the first place, employment of the Voorhees bag has been largely replaced by more modern procedures. The danger of introduction of toxic material into the uterine sinuses by the use of the uterine bag should lead to complete and universal discarding of this procedure. Secondly, the same holds true of our attitude toward the fetus which has died in utero. It is apparently much safer to empty the uterus as soon as a diagnosis of intrauterine death has been made.

Through the efforts of the essayist, a supply of Fraction I is now available at Children's Hospital in San Francisco. It was my recent misfortune to watch as a patient died of bleeding which could not be controlled even by hysterectomy. Had this material been available at the time, such an outcome might have been prevented.

CASE REPORT

The Transpalatal Approach for Juvenile Fibroma

WALTER E. HECK, M.D., and ROBERT C. MCNAUGHT, M.D.,
San Francisco

JUVENILE fibroma is a specific, highly vascular, non-infiltrating, essentially benign neoplasm[1] that occurs in the nasopharynx of pubescent persons, almost always males. The term "nasopharyngeal fibroma of adolescence" has also been used to describe such lesions, although the period of onset is just before puberty.

Other synonyms include juvenile nasopharyngeal fibroma, or angiofibroma; juvenile basal fibroma (basal referring to the basi-occipital site); bleeding fibroma of adolescence, and even fibroid of the nasopharynx.

INCIDENCE

Figi and Davis[2] reported the largest series of cases—114 observed in a 40-year period at the Mayo Clinic. Martin and co-workers[4] reported 29 cases in a 20-year period.

PATHOLOGY

A juvenile fibroma (Figure 1) is a smooth, bulky, red, non-ulcerated tumor in the nasopharynx, readily visible by direct anterior rhinoscopy or in a nasopharyngeal mirror. Figi[2] expressed the opinion that the appearance is so distinctive that a physician who is familiar with the tumor might make exception to the rule that biopsy of a tumor is imperative. It is doubted, however, that he would strongly advocate such a departure.

The stroma of the tumor, as microscopically observed, is made up of fibrocytes and contains many small blood vessels. As the vessels are characteristically lacking in musculature, they have no contractibility. This is one reason for the tendency of such tumors to bleed excessively. The covering epithelium is usually that of the area of origin. Often in the typical pseudostratified, ciliated, columnar epithelium (so-called respiratory or Schneiderian epithelium) there are areas of metaplasia to squamous epithelium, stratified or even pavement in type.

CLINICAL COURSE

The usual course observed clinically begins with the symptom of nasal obstruction in a pubescent or early adolescent person. (Obviously, the tumor must grow in size for a time before obstruction becomes symptomatic.) Rhinolalia clausa usually is observed. Then, typically, the patient begins to have nasal hemorrhages, usually severe and difficult to control. As the tumor grows it distends the adjacent structures of the nasopharynx and nose. The facial deformity has been termed "frog-face."

Often the history includes note of attempted biopsy, or of attempted "polypectomy" based on an erroneous diagnosis, which had to be terminated because of hemorrhage.

From the Division of Otolaryngology, Department of Surgery, Stanford University School of Medicine.

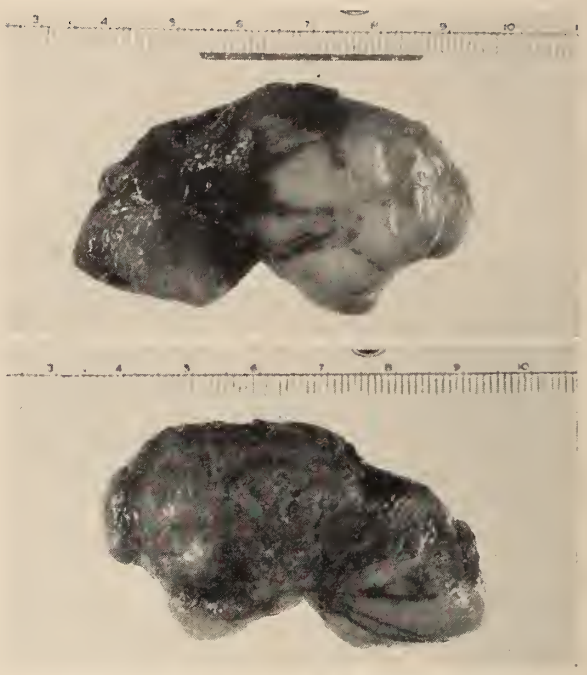

Fig. 1.—Photograph of juvenile fibroma removed from the second patient. *Upper*—the presenting (antero-inferior) surface. *Lower*—the base of the tumor.

At the time of full body growth, usually at 20 to 25 years of age, the tumor becomes smaller; but, as Figi[2] emphasized, the regression is not as pronounced as the literature implies.

PATHOGENESIS

The probable pathogenesis of these tumors is correlated with the clinical course. Up to the twentieth year the body of the sphenoid bone is joined to the basi-occiput (that part of the occipital bone anterior to the foramen magnum) by a plate of cartilage.[5] The juvenile fibroma is believed to arise from the perichondrium of this cartilaginous plate. After the twentieth year, ossific union takes place between the sphenoid bone and the basi-occiput, usually over a two- or three-year period. Any spontaneous regression of the tumor, therefore, occurs at this time.

REASONS FOR TREATMENT

There are four compelling reasons for vigorous therapy in the presence of this entity, the first of which is the repeated hemorrhages. They are very severe, often necessitating multiple transfusions, and are very difficult to control. The second is the mechanical obstruction of the nasopharynx and nasal fossae, which makes the patient subject to secondary infections of the sinuses and the middle ear. The third is the facial deformity which may be a permanent disfigurement once definitely established. Finally, cases are reported of encroachment on the orbit or even intracranial extension. The larger the tumor is permitted to grow, the more difficult its removal.

REPORT OF TWO CASES

Case 1. The patient, an 11-year-old boy, first observed in the ear, nose and throat department of the Stanford Outpatient Clinic in 1947, gave a history of nasal obstruction and repeated epistaxis during the previous ten months. A diagnosis of nasal polyp had been made elsewhere and an attempt to excise a specimen for biopsy was followed by hemorrhage. The patient was then referred to the Stanford clinic. The diagnosis was made on the basis of biopsy, and the patient was first given external radiation therapy. In the ensuing two years, he had four interstitial insertions of radon seeds. In September 1949, surgical excision was carried out, with a preliminary left external carotid ligation. The approach was made by a longitudinal, transpalatal incision, after the technique of Brown.[1] The soft palate was incised at the midline, and the incision carried forward about one and one-half centimeters into the hard palate. The exposed part of the bony palate was removed. The tumor extended into the left parapharyngeal space. It compressed, but did not enter, the left antrum. The base of the tumor was pried loose by means of a periosteal elevator. The incision was closed and healed by primary intention. When the patient was last observed in the fall of 1950, there was no sign of persistent or recurrent tumor. The nasal, nasopharyngeal, and palatal structures were anatomically normal.

Case 2. A 15-year-old boy first observed in December 1950 was referred for treatment of a typical juvenile fibroma. The history, results of examination, and microscopic appearance of biopsy specimens previously excised were characteristic. Without preliminary radiation or carotid ligation, the tumor was removed surgically. The approach was through a transverse transpalatal incision made about one and one-half centimeters anterior to the posterior edge of the hard palate, and the exposed palatal bone and adjacent area of nasal septum was removed. The tumor was pried loose at its base by means of a periosteal elevator. Bleeding from the site of origin was stopped by thorough electrocoagulation. The incision was closed and healed primarily except at the middle where there was sloughing at the site of a suture. A small dental prosthesis was fashioned to cover this defect, and, when the patient was last observed, six months postoperatively, the fistula had spontaneously closed. There was one small nodule of apparently persistent or recurrent tumor, and this was electrocoagulated in the out-patient clinic.

SURGICAL APPROACH

Figi[2] expressed the opinion that the best surgical approach to such tumors is transantrally, through the maxillary sinus by a Caldwell-Luc incision, with removal of the lateral wall of the nose. By this approach, excellent exposure is obtained, but it entails permanent disruption of nasal structure. In the two cases here reported, the transpalatal approach was adequate, and the anatomical disruption was less.

Fig. 2.—Microscopic appearance of the juvenile fibroma removed from the second patient, showing the respiratory epithelium, fibrous stroma, and the endothelial-lined capillaries and blood spaces.

OTHER THERAPY

The use of interstitial radiation in Case 1 and of surgical diathermy in Case 2 is in agreement with generally-used therapy of juvenile fibromas. Because the clinical course of the disease is related to the period of body growth, the question of using hormonal therapy is always raised. Kerwin[3] recently advocated the use of androgens, and reported one case in which that treatment was given. Hormonal therapy has been previously tried and discarded by others.

SUMMARY

A transpalatal approach was used in two cases for removal of juvenile fibroma. Exposure of the operative field was adequate and the tumors were apparently successfully excised. Postoperatively the structure was essentially normal, as contrasted with the anatomic disturbance remaining after use of the transantral approach.

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California MEDICINE

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EDITORIAL

Malaria in Veterans Returning from Korea

The return of large numbers of Armed Forces personnel to the United States from Korea focuses attention, for the second time within a decade, on the age-old problem of malaria. Tertian malaria (P. vivax) is endemic in Korea, and numerous cases of malaria have been observed in these returning personnel. Since many of them have been taking suppressive therapy, the disease will frequently become clinically evident after discharge or while they are on leave in their home communities. The resulting problem is of national importance, and is twofold in nature: First, the recognition and treatment of the acute attack, and prevention of relapses, and secondly, the prevention of new foci of endemic malaria in areas where suitable insect vectors, certain species of Anopheles mosquitoes, are known to be present.

In the recognition of acute attacks the demonstration of parasitemia by means of blood smears is essential. In order that a record may be kept of all positive cases, so that appropriate sanitary and public health measures may be taken to protect the communities in which the possibility of endemic transmission exists, the Public Health Service has requested that all positive, doubtful, or controversial blood slides be referred, through the laboratories of the State Board of Health, to the National Depository for Malaria Slides, Parasitology Laboratories, Communicable Disease Center, P.O. Box 185, Chamblee, Ga., where all slides submitted will be reviewed by a group of experts and the results will be reported to the Health Department and to the patient's physician. Where indicated suitable sanitary measures will then be undertaken jointly by the State Health Department and the Public Health Service.

In the treatment of malaria considerable progress has been made since World War II. Newer antimalarial agents superior to the familiar quinine and atabrine have been developed, and many substances are at present under active investigation. The treatment of the acute attack is relatively simple. Chloroquine is superior in all respects to quinine and atabrine and is currently regarded as the drug of choice. The recommended dosage is 1 gm. orally followed by 0.5 gm. in six hours and 0.5 gm. daily for two days, a total of 2.5 gm. in three days. This regimen will abolish parasitemia and will usually stop acute attacks promptly, but has no significant effect on the tissue or exoerythrocytic forms of the parasite, the source of recurring parasitemia and relapses. To prevent relapses of vivax malaria the treatment program should combine an 8-amino quinoline, such as pentaquine, with quinine. Pentaquine is related to plasmochin but is considerably less toxic. The recommended dosage consists of 10 mg. of pentaquine base and 0.65 gr. of quinine sulfate orally every eight hours for 14 days. This combination has demonstrated effectiveness on the tissue forms and has significantly lowered the relapse rate of tertian malaria.

If the measures of early recognition, prompt reporting, and adequate treatment are carried out, it can be confidently expected that the development of new foci of malaria in the United States will be effectively prevented.

Letters to the Editor . . .

October 5, 1951

EDITOR,
CALIFORNIA MEDICINE:

I have received a beautiful display box of an antibiotic in the many useful dosage forms produced by the manufacturer.

I wish to record my thorough disapproval of drug houses sending samples and making display advertising to the medical profession. In as far as it is propaganda, the medical profession ought to have the courage to resist it. In as far as it is education, the medical profession ought to have pride enough to say, "We will manage our own education." The cost of this advertising either is returned to our own pockets through federal taxation, or else it is loaded onto our patients as reflected in the price they have to pay for the drugs we choose to order for them.

The first is foolish and the second is unconscionable. This protest is not made merely to hurt the feelings of the pharmaceutical companies but is a thoughtful step in a crusade that I have been waging in a desultory fashion for a long time without as yet having gained very many converts. The difficulty is of course aureogenic amblyopia.

R. R. NEWELL, M.D.
San Francisco

Endogenous Cholesterol

In 1933 it was shown by Schoenheimer and Breusch[1] that mice fed a cholesterol-free diet are able to synthesize cholesterol. Experimental evidence suggesting that this endogenous cholesterol is a more important factor than dietary cholesterol in the production of arteriosclerosis is currently reported by Siperstein[2] and associates of the University of California. The California biochemists based this conclusion on tests of the cholesterol-synthesizing power of arterial tissues.

Several 0.5 cm. segments of the aorta were removed from chickens and rabbits. Liver samples were taken as controls. Adopting methods previously perfected by Chernick,[3] each aortic segment was incubated for three hours in 5 cc. of Krebs-bicarbonate buffer solution containing 1 mg. of doubly C^{14}-labeled sodium acetate. At the end of three hours the CO_2 envolved was trapped in KOH and its C^{14} content determined. In typical examples an average of 5.1 arbitrary units of C^{14} content were recovered per gram of rabbit aortic tissue, with 13.5 C^{14} units recovered per gram in control tests with the liver. Analysis of the fluids in the flasks showed that on an average 36.5 arbitrary units of acetate-C^{14} were synthesized into cholesterol per gram of aortic tissue. About four times that amount was synthesized by each gram of liver.

Endogenous cholesterol as the dominant factor in the pathogenesis of arteriosclerosis is suggested by Chaikoff's[4] earlier demonstration that on a cholesterol-free diet chickens injected with stilbestrol develop hypercholesterolemia promptly and atherosclerosis in about a year.

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W. H. MANWARING, M.D.
Palo Alto

Bacterial Agglutinins in Cancer

It was noted by Parfentjev and Duran-Reynals[1] of Yale University that there is a fall in Proteus agglutinins in chicken serum throughout the development of Rous sarcoma. This led them to make a statistical study[2] of these agglutinins in human serums in malignant disease.

Selecting Proteus OX19 as their test organism, they found that in infants under one year of age, only one out of fourteen had demonstrable Proteus agglutinins. This increased to three out of ten by the fifth year. Among normal adults 95 per cent had these agglutinins. Among 163 hospital patients with non-malignant disease 130, or 80 per cent, had Proteus agglutinins. Of 28 patients with cancer, only eight, or 28 per cent, had the agglutinins. Among 14 patients successfully treated for cancer with no evidence of recurrences, 12, or 86 per cent, were agglutinin-positive. A similar paucity of bacterial agglutinins was previously reported by other investigators[3] in both Hodgkin's disease and leukemia.

Since Proteus agglutinins are present in the globulin fraction of human serum, the Yale University clinicians concluded that the subnormal titer in untreated cancer patients may be due to a quantitative or qualitative abnormality in serum globulins.

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W. H. MANWARING, M.D.
Palo Alto

CALIFORNIA MEDICAL ASSOCIATION

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Council Meeting Minutes

Tentative Draft: Minutes of the 386th Meeting of the Council, San Francisco, November 11, 1951.

The meeting was called to order by Chairman Shipman in Room 220, St. Francis Hotel, San Francisco, at 9:30 a.m., Sunday, November 11, 1951.

Roll Call:

Present were President MacLean; Speaker Charnock; Councilors Shipman, Lum, West, Ball, Loos, Morrison, Dau, Ray, Green, Pollock, Frees, Thompson, Bailey, Varden and Heron; Secretary Daniels.

Absent for cause: President-elect Alesen, Councilors Sampson and Montgomery, Editor Wilbur.

A quorum present and acting.

Present by invitation were Vice-Speaker Randel, Executive Secretary Hunton, Assistant Executive Secretary Thomas, Legal Counsel Hassard, Messrs. Clancy, Gillette and Pettis of public relations staff, Mr. Ben H. Read of the Public Health League of California; county society executive secretaries William Nute of San Diego, Robert Wood of San Mateo; Dr. D. H. Murray, legislative chairman.

Present during all or part of the meeting: Dr. Malcolm Merrill, acting State Director of Public Health; Dr. John R. Upton, Blood Bank Commission chairman; Dr. Francis Hodges, secretary of California Physicians' Service; Dr. Alson Kilgore; and Messrs. Clem Whitaker, Jr., and Ned Burman of public relations counsel.

1. *Minutes for Approval:*

(a) On motion duly made and seconded, minutes of the 385th Council meeting, held September 22, 1951, were approved.

(b) On motion duly made and seconded, minutes of the 229th Executive Committee meeting, held October 25, 1951, were approved.

2. *Membership:*

(a) A report of membership as of November 9, 1951, was received and ordered filed.

(b) On motion duly made and seconded, three 1950 members whose dues had been received were voted reinstatement.

(c) On motion duly made and seconded, 39 members (1951) whose dues had been received were voted reinstatement.

(d) On motion duly made and seconded in each instance, nine applicants were voted Associate Membership. These were:

Rosemary O. Brunetti, Theodore Carlton, and Isamu Nieda, Alameda-Contra Costa; Margaret J. Miller, Russel F. Rypins, and Wilfred Toreson, San Francisco; Edward T. Jewett, San Mateo; Salvador Jacobs and Joseph D. Warrick, Ventura.

(e) On motion duly made and seconded in each instance, four applicants were voted Retired Membership. These were:

Peter Joseph Cuneo, Kern County; George O. Chalfant, San Francisco County; Jess F. Jacobsen, San Francisco County; William Carston Lynch, San Mateo County.

(f) On motion duly made and seconded in each instance, reductions of dues were voted for four applicants because of illness or postgraduate study.

3. *Financial:*

(a) A report of bank balances as of November 9, 1951, was received and ordered filed.

(b) A report of income and expenditures for October and for the four months ended October 31, 1951, was received and ordered filed.

4. *California Physicians' Service:*

Dr. Francis T. Hodges, Secretary of C.P.S., reported that as of October 28, 1951, there were 10,928 physician members and approximately 908,000 beneficiary members. He expressed the expectation that not later than the start of 1952, and possibly earlier, full payment on the present fee schedule will be made.

5. *State Department of Public Health:*

Dr. Malcolm Merrill, Acting State Director of Public Health, reported on medical screening being given Mexican nationals who are admitted to the state as agricultural or other workers. It is hoped to improve the medical screening in Mexico through the use of state representatives working in Mexican cities.

Dr. Merrill also reported that 184 cases of malaria have been reported in California to date, mostly late cases contracted and suppressed in the early stages in Korea. He also stated that the department is working with medical school deans and others in establishing regulations for laboratories which seek licenses to use animals. The State Board of Health is also planning hearings on proposed regulations under the Clinical Laboratory Act.

Dr. Merrill reported that Dr. Wilton L. Halverson, State Director of Public Health, had been elected

President of the American Public Health Association and on motion duly made and seconded it was voted to send Dr. Halverson the sincere congratulations of the Association on this honor.

6. *C.P.S. Fee Schedule Committee:*

A report by Dr. DeWitt Burnham, chairman of the C.P.S. Fee Schedule Committee, was read. It showed that a subcommittee of eight members had been appointed, that questionnaires had been sent to all physician members and some 3,000 replies received to date. The replies will be mechanically tabulated and the committee will meet one week hence to study the ranges of fees shown in these replies.

7. *C.P.S. Study Committee:*

Dr. Wilbur Bailey, chairman of the C.P.S. Study Committee, reported on the initial meeting of the committee, at which it was tentatively decided to engage in market surveys and other business studies designed to produce factual information. He presented two cost estimates for such studies, total costs running about $30,000 to $40,000.

Dr. Alson Kilgore, a member of the committee, discussed the possible future courses for C.P.S. and suggested that the House of Delegates first determine which course should be taken; once that is determined, the committee could seek authorization to continue its studies.

On motion duly made and seconded, it was voted that the Council discuss C.P.S. affairs in the report of the Council to be made to the House of Delegates and to request that the House of Delegates approve the appropriation of funds to make factual business studies of C.P.S. and other medical cost prepayment plans.

8. *Committee on Industrial Accident Commission:*

Dr. Frank J. Cox, chairman of the Committee on Industrial Accident Commission, requested a determination of whether his committee should seek a fee schedule based on fee for service, on flat fees or on some combination of the two. He reported that his committee is about to receive factual data on some 10,000 industrial injury cases, from which it can accurately predict the effect on compensation insurance premiums of an increase in medical costs. It is now believed that sufficient data have been assembled to warrant request for a flat 25 per cent increase in fees.

On motion duly made and seconded, it was voted to recommend that the committee seek a fee-for-service fee schedule and request a percentage increase in fees justified by the factual material developed.

9. *Blood Bank Commission:*

Dr. John R. Upton, chairman of the Blood Bank Commission, reported that ten blood banks are now either operating or forming in the statewide system and that eight are in the armed forces blood procurement program. He also reported on his participation in the Minneapolis meeting of the American Association of Blood Banks and on exhibits given by the commission at several recent medical meetings.

On motion duly made and seconded, the Council expressed a vote of confidence in the Blood Bank Commission and in its chairman, Dr. Upton.

10. *Blood Bank of San Bernardino-Riverside Counties:*

On motion duly made and seconded, it was voted to permit the Blood Bank of San Bernardino-Riverside Counties to complete payment on its first $10,000 loan before starting repayment of the second $10,000 advance.

11. *Governor's Conference on Problems of the Aging:*

Dr. Edwin L. Bruck reported on the Governor's Conference on Problems of the Aging, held in Sacramento on October 15-16, 1951, and stated that a complete report was under preparation for publication after the first of next year. This will contain summaries of all decisions reached.

12. *Public Policy and Legislation:*

Dr. Dwight H. Murray, legislative chairman, reported on several national legislative items and discussed the need of supporting the American Medical Education Foundation. He reported that "$100 a year" or "$10 a month" clubs are being formed among physicians in various states to aid this fund and stressed the importance of aiding such groups.

Discussion was held on recent statements by Governor Warren on the subject of compulsory health insurance.

13. *Legal Department:*

Mr. Hassard discussed the pending litigation in San Diego and reported on action taken by the State Commissioner of Insurance against two underwriters of health insurance programs.

14. *Committee on Emergency Medical Service:*

On motion duly made and seconded, approval was voted a manual on the care of emergency cases drafted by state civil defense authorities and previously approved by Dr. Justin J. Stein, chairman of the Committee on Emergency Medical Service.

15. *Advisory Planning Committee:*

On motion duly made and seconded, Mr. William Nute, executive secretary of the San Diego County Medical Society, was elected a member of the advisory Planning Committee.

Mr. Hunton discussed the plans made for securing a test distribution of a plaque designed by the public relations department of the A.M.A. for display in physicians' offices.

16. *San Francisco Medical Society:*

On motion duly made and seconded, it was voted to express a reasonable interest in the possibility of the Association's occupying space in a medical center building tentatively planned for construction by the San Francisco Medical Society.

17. *California Mineral Springs:*

On motion duly made and seconded, the suggestion of a member for a more active part in the de-

velopment of mineral springs resorts in California was voted to be referred to the Committee on Hospitals, Dispensaries and Clinics.

18. *Interim Session of House of Delegates:*

(a) On motion duly made and seconded, it was voted to prepare an amendment to Article V, Section 2 of the By-Laws to clarify the representation of county societies in the House of Delegates.

(b) On motion duly made and seconded, it was voted to prepare suitable amendments to make the Vice-Speaker of the House of Delegates a member of the Council.

(c) On motion duly made and seconded, it was voted to request the Committee on Scientific Work to prepare a suitable scientific program for the December 1-2 session.

19. *Practical Nursing:*

A request for cooperation from a group of practical nurses was received and ordered referred to the committee composed of Drs. Howard Naffziger, Dwight L. Wilbur and Arthur Kirchner.

20. *Public Relations:*

Mr. Clem Whitaker, Jr., public relations counsel, urged that members of the Woman's Auxiliary participate in women's organizations throughout the state.

21. *California State Department of Education:*

On motion duly made and seconded, it was voted to recommend Dr. Ulrich A. Fritschi of Sacramento for appointment on an advisory board on school health problems to be established by the State Department of Education.

22. *Time and Place of Next Meeting:*

It was decided to leave the time and place of the next meeting to the call of the chairman, with the exception that a meeting would be held during the December 1-2, 1951, period in Los Angeles.

23. *C.M.A.-C.P.S. Liaison Committee:*

A report from the C.M.A.-C.P.S. Liaison Committee was read and on motion duly made and seconded it was voted to approve a contract between C.P.S. and the Old Sailors' Home.

Adjournment:

There being no further business to come before it, the meeting was adjourned at 4:40 p.m.

SIDNEY J. SHIPMAN, M.D., *Chairman*
ALBERT C. DANIELS, M.D., *Secretary*

In Memoriam

BONYNGE, CHARLES W. Died in Los Angeles, October 6, 1951, aged 71, of ruptured abdominal aneurysm. Graduate of the University of Southern California School of Medicine, Los Angeles, 1903. Licensed in California in 1904. Doctor Bonynge was a member of the Los Angeles County Medical Association, a life member of the California Medical Association, and a Fellow of the American Medical Association.

✤

CHRISTESON, EDGAR L. Died in Los Angeles, September 25, 1951, aged 59, of carcinoma of the duodenum. Graduate of the St. Louis University School of Medicine, 1922. Licensed in California in 1930. Doctor Christeson was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

✤

COOK, ORRIN S. Died in Sacramento, October 24, 1951, aged 59. Graduate of the University of California Medical School, Berkeley-San Francisco, 1917. Licensed in California in 1917. Doctor Cook was a member of the Sacramento Society for Medical Improvement, the California Medical Association, and a Fellow of the American Medical Association.

✤

CUMMINS, HARVEY R. Died in Los Angeles, September 18, 1951, aged 43. Graduate of the Emory University School of Medicine, Emory University, Georgia, 1934. Licensed in California in 1945. Doctor Cummins was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

DOUGHERTY, JOHN A. Died in Piedmont, October 6, 1951, aged 60, after a long illness. Graduate of Vanderbilt University School of Medicine, Nashville, 1916. Licensed in California in 1923. Doctor Dougherty was a member of the Alameda-Contra Costa Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

✤

GALBRAITH, ALEXANDER. Died in Oakland, October 13, 1951, aged 80. Graduate of Rush Medical College, Chicago, 1899. Licensed in California in 1904. Doctor Galbraith was a retired member of the Alameda-Contra Costa Medical Association, and the California Medical Association, and an Associate Fellow of the American Medical Association.

✤

JONES, GEORGE W. Died in Pomona, October 8, 1951, aged 51, of coronary artery disease. Graduate of University of Cincinnati College of Medicine, 1925. Licensed in California in 1940. Doctor Jones was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

✤

LONG, FREDERICK. Died in San Francisco, October 19, 1951, aged 68. Graduate of the University of California Medical School, Berkeley-San Francisco, 1910. Licensed in California in 1910. Doctor Long was a member of the San Francisco Medical Association, the California Medical Association, and the American Medical Association.

✤

LONG, JAMES H. Died in Pasadena, June 30, 1951, aged 71, of coronary thrombosis. Graduate of Harvard Medical School, Boston, 1914. Licensed in California in 1925. Doctor Long was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

Questions and Answers about C. P. S.

Question: Does a woman lose her maternity benefits immediately if she transfers from a group enrollment to the direct payment program?

Answer: No, not immediately. The $50 allowance toward the physician's fee for normal maternity care is continued for nine months after the date of transfer to direct payment membership.

Question: In treating veterans under the Home Town Care Program, how do I obtain authorization for additional services which become necessary and which are in excess of what has been originally authorized for the period?

Answer: If in the course of treating a veteran patient it becomes evident that services in addition to those already authorized are necessary, the physician should telephone collect to the Medical Authorization Officer in the nearest Regional Office of the Veterans Administration—San Francisco, Los Angeles or San Diego.

Question: The new C.P.S. medical contract limits x-ray and laboratory services outside the hospital to $25 and $10 respectively per contract year. How may the physician know if the patient has used all or any part of these allowances?

Answer: Whenever a physician member who performs x-ray and laboratory services in his own office submits a bill to C.P.S. for such services, he is sent a form which indicates (1) the amount which will be paid by C.P.S.; (2) the amount of the $25 and $10 allowances which remain. The form also indicates if the allowances have already been exhausted and the date when they will be renewed for another year.

Question: How does the physician bill for x-ray and laboratory services rendered to a C.P.S. patient (who is under the income ceiling) after the yearly $25 and $10 allowances for each have been exhausted?

Answer: In these instances, the physician should bill the patient directly. C.P.S. members are responsible themselves for all services which are beyond the provisions of their C.P.S. coverage, and the income clause does not apply when C.P.S. coverage does not apply.

Question: What part does the physician have in filling out the hospital admission notice when one of his C.P.S. patients enters the hospital?

Answer: The physician's part in connection with the hospital admission notice is indispensable to action by C.P.S., because, among other things, it gives the diagnosis. This information, which only the physician can provide, is absolutely essential to C.P.S. Without it, C.P.S. cannot determine its liability in the case, based on the contract held by the patient. If the physician does not fill in this information himself, he should authorize a member of the hospital's staff to do it for him.

Question: Under the revised C.P.S. direct payment program which does not provide out-patient medical services, what happens if a patient is receiving medical care at the time of transfer from group membership to direct pay?

Answer: When a C.P.S. member is receiving medical care under the two-visit-deductible medical contract at the time of transfer to the direct payment program, the terms of the two-visit-deductible contract are continued until the benefits for the condition being treated have been exhausted.

Question: I treated a veteran patient until his condition indicated that further treatment at the time was unnecessary. A few months later the veteran complained of a recurrence of the condition and requested more treatment. What is the simplest method of obtaining authorization under these circumstances?

Answer: Inasmuch as the veteran had already been authorized by the Veterans Administration for treatment of the condition, it is not necessary to follow the normal procedure in obtaining authorization. Instead, the physician may contact the nearest VA Regional Office by telephone or telegram, collect. Telephone numbers are: San Francisco, YUkon 6-3500, extension 370 or 372; Los Angeles, PRospect 4711, extension 701; San Diego, FRanklin 9-8031.

Question: As regards retroactive payment by the Veterans Administration for services not previously authorized, is there any difference in the regulations which apply to Spanish-American War veterans and other veterans?

Answer: Yes. The regulation applying to Spanish-American War veterans is: To be payable by the Veterans Administration, all services in each and every specific medical condition must be authorized in advance of the services being rendered.

Eligible veterans of other wars who require prompt treatment may receive it immediately (prior to authorization) if notification that the services have been rendered is sent to the C.P.S. Veterans program immediately afterward.

Question: Do C.P.S. members enrolled under the individual family plan have any medical benefits; or, if not, can they extend their coverage to include medical benefits?

Answer: The standard coverage provided by the individual family plan is surgical and hospital. However, members enrolled under this plan have the option of subscribing for medical-services-while-

hospitalized benefits by paying the additional cost over rates for the standard coverage. All eligible family members must subscribe for this additional coverage in order for any one of them to obtain it. Out-patient medical coverage (the two-visit-deductible medical contract) is not available to individual family plan members. In addition, their surgical contract provides for surgery and treatment of fractures and dislocations and x-rays to determine same *in the doctor's office.*

Change in Method of Authorization for Home-Town Care of Veterans

Effective November 1, an important change was made by the Veterans Administration in the method for eligible veterans to receive authorization for outpatient medical treatment.

Henceforth, veterans seeking care on an outpatient basis, either at a VA clinic or from a private physician under the C.P.S.-VA Home Town Care Program, must make application, in writing, directly to the VA regional office in San Francisco. Los Angeles or San Diego. Formerly, applications could be made either through the VA or through a private physician.

Except in cases requiring prompt treatment, the change makes it unnecessary for physicians to complete Form 52 (the "request for authority for treatment"). C.P.S. will send the authorization to the physician of the veteran's choice after the veteran's application has been approved by VA.

In cases where prompt treatment is indicated. the veteran may apply directly to a private physician. In such instances the physician should request authorization by submitting a Form 52 immediately to C.P.S.

Physicians may contact the nearest VA regional office by telephone or telegraph, collect, if any additional services are needed which have not been authorized.

(Note: C.P.S. has mailed a new instruction manual to each physician member who is treating veterans under the Home Town Care Program. Manuals will also be sent, on request, to any physician member not now treating veterans who desires to participate in the program in the future.)

C. P. S. Green Envelopes Misused

Many physicians apparently are misunderstanding the use which was intended for the special green envelopes recently supplied by C.P.S. to doctors' offices, the health plan reports.

The green envelopes, marked for the attention of the Medical Director, were devised to speed C.P.S. handling of bills for complicated or unusual services rendered to C.P.S. patients. Although such bills customarily are brought to the attention of the Medical Director, a saving of time results from having them sent directly to the Medical Director — instead of having them routed through the normal processing channels as is done with routine bills.

Early experience, however, indicates that much of the good results to be achieved by use of the envelopes is being lost because, in many instances, they are being used for routine bills.

In addition, C.P.S. points out, when a bill is sent in a green envelope it should be accompanied by a short report from the physician, describing the unusual or complicated aspect of the case.

NEWS and NOTES

NATIONAL • STATE • COUNTY

LOS ANGELES

At the November election the following officers of the **Los Angeles Radiological Society** for the coming year were elected: President, Harold P. Tompkins, M.D., Los Angeles; vice-president, Richard L. Smith, M.D., Santa Monica; secretary, John B. Hamilton, M.D., Glendale; treasurer, M. M. Haskell, M.D., Long Beach.

* * *

The first day of the annual mid-winter meeting of the **California Society of Pathologists,** held December 1 and 2, in Los Angeles, was dedicated to Dr. Ernest M. Hall, retiring professor of pathology of the School of Medicine, University of Southern California. As a tribute to Dr. Hall, the majority of the scientific contributions of the day were offered by former students and associates. Guest speakers included Dr. Stanley P. Reimann, professor of oncology and director of the Institute for Cancer Research, Philadelphia; Dr. Sidney C. Madden, professor of pathology at the School of Medicine, U.C.L.A.; and Dr. Riojun Kinosita, visiting professor of pathology, U.C.L.A., and professor of pathology at Osaka Imperial University.

* * *

Among grants totalling $160,756 in aid of research and training made last month by **United Cerebral Palsy** was one of $10,000 to support a study by Dr. H. W. Magoun, professor of anatomy, University of California, Los Angeles, on the physiology of the cerebral cortex and basal ganglia in relation to cerebral palsy.

SAN BERNARDINO

The Second Annual Regional **Medical and Surgical Institute** for the Southern California Counties, sponsored by the Postgraduate Activities Committee of the California Medical Association, is to be held at Arrowhead Springs Hotel, San Bernardino, January 17 and 18, 1952. Local arrangements will be under the direction of the Postgraduate Study Committee of the San Bernardino County Medical Society. The teaching staff will be furnished by the Medical Extension Division, School of Medicine, University of California at Los Angeles, and the program which has been planned by the Regional Postgraduate Study Committee representing the counties of San Bernardino, Orange, Riverside, Imperial and parts of San Diego and Los Angeles is as follows:

THURSDAY, JANUARY 17

8:00-9:00 a.m.: Registration, Arrowhead Springs Hotel

Morning Session

Chairman, R. C. Pollock, M.D., San Bernardino

9:30-10:30 a.m.—Recent Progress Related to Antibiotics—William L. Hewitt, M.D., assistant professor of medicine, University of California School of Medicine, Los Angeles.

10:30-11:30 a.m.—Toxemia of Pregnancy—Daniel G. Morton, M.D., chairman, department of obstetrics and gynecology, University of California School of Medicine, Los Angeles.

11:30-12:30 a.m.—Diagnosis and Treatment of Infections of the Hand—William P. Longmire, Jr., M.D., professor and chairman, department of surgery, University of California School of Medicine, Los Angeles.

12:30-2:00 p.m.—*Luncheon and Round Table*—Chairman, Arthur J. Nies, M.D., Orange.

Afternoon Session

Chairman, Delbert Williams, M.D., San Bernardino

2:00-3:00 p.m.—The Chemotherapy of Gastrointestinal Infections—William L. Hewitt, M.D.

3:00-4:00 p.m.—Office Gynecological Procedures (including Fundal and Cervical Cancer)—Daniel G. Morton, M.D.

4:00-5:00 p.m.—Diagnosis and Treatment of Lesions of Pancreas—William P. Longmire, Jr., M.D.

6:30 p.m.—*Dinner Meeting*—Chairman, Roger Vargas, M.D., San Bernardino.

Speaker—Stafford L. Warren, M.D., dean and professor of biophysics, University of California at Los Angeles.

FRIDAY, JANUARY 18

Morning Session

Chairman, Max Goodman, M.D., San Bernardino

9:00-10:00 a.m.—Clinical Use of Cortisone and ACTH—Roger O. Egeberg, M.D., chief of medical service, Wadsworth General Hospital, Veterans Administration Center, Los Angeles.

10:00-11:00 a.m.—Treatment of Head Injuries—John B. French, M.D., chief, neurosurgery and acting chief, neuropsychiatry, Veterans Administration Hospital, Long Beach.

11:00-12:00 noon—Use of Blood Fractions in Children—John M. Adams, M.D., professor and chairman of the pediatrics department, School of Medicine, University of California at Los Angeles.

12:15-1:45 p.m.—*Luncheon, Round Table Discussion*—Chairman, H. C. Barron, M.D., Riverside.

Afternoon Session

Chairman, Jack R. Bostwick, M.D., Brawley

2:00-3:00 p.m.—Emergency Neurosurgical Procedure—John B. French, M.D.

3:00-4:00 p.m.—Acute Respiratory Diseases—John M. Adams, M.D.

4:00-5:00 p.m.—The Diagnosis and Treatment of Thyroid Disease—Roger O. Egeberg, M.D.

SAN FRANCISCO

The Stanford University School of Medicine will offer the annual **postgraduate conference in clinical ophthalmology** from March 24 through March 28, 1952. The program this year will be devoted to ophthalmic surgery. Registration will be open to physicians who limit their practice to the treatment of diseases of the eye or eye, ear, nose and throat. In order to allow free discussion by members of the conference, registration will be limited to 30 physicians.

Instructors will be Dr. A. Edward Maumenee, Dr. Dohr-

mann K. Pischel, Dr. Jerome W. Bettman, Dr. Max Fine, Dr. Earle H. McBain, and Dr. Arthur J. Jampolsky.

Programs and further information may be obtained from the office of the dean, Stanford University School of Medicine, 2398 Sacramento Street, San Francisco 15, California.

* * *

Dr. Frederick C. Cordes, San Francisco, was named president-elect of the American Academy of Ophthalmology and Otolaryngology, October 18 at the annual session in the Palmer House, Chicago. Presidents of the Academy are elected a year in advance and take office on January 1 following the annual meeting. The incoming president will be Dr. James Milton Robb, Detroit, who will assume the office on January 1, 1952; Dr. Cordes will become president on January 1, 1953.

SANTA BARBARA

Physicians from the counties of Santa Cruz, Monterey, San Benito, San Luis Obispo, Ventura and Santa Barbara attended the Second Annual **West Coast Counties Regional Medical and Surgical Institute**, which was held at Cottage Hospital, Santa Barbara, October 25 and 26. The teaching program was arranged by the Regional Postgraduate Study Committee of the West Coast Counties in conference with Dr. Gordon E. Goodhart, associate director of medical extension education, University of Southern California School of Medicine, Los Angeles.

Transportation to points of interest in Santa Barbara and a tea in the afternoon on the first day were arranged by the Santa Barbara Auxiliary for the entertainment of visiting wives of physicians.

GENERAL

The Foundation of the American Society of Plastic and Reconstructive Surgery announced the winners of this year's awards in its competitive essay, at the annual meeting of the society in Colorado Springs, October 30 to November 1. They were: Dr. Richard B. Stark, New York City, a scholarship award for his essay, "The Cross-Leg Flap Procedure"; **Dr. Kathryn Lyle Stephenson**, Santa Barbara, California, honorable mention for "The Production of Ectopic Cartilage"; Dr. Michael N. Tempest, Leeds, Yorkshire, England, honorable mention for "Cross-Finger Flaps in the Treatment of Injuries to the Finger Tip"; and **Dr. Allyn J. McDowell**, North Hollywood, California, honorable mention for "Mass Treatment of Burns in Atomic Warfare."

Particulars pertaining to the 1952 essay competition may be had from the award committee, in care of Jacques W. Maliniac, M.D., 11 East 68th Street, New York 21, N.Y.

* * *

The Fifth American **Congress on Obstetrics and Gynecology** will be held in Cincinnati, Ohio, March 31 through April 4, 1952, at the Netherland Plaza Hotel. The congress will feature a comprehensive five-day scientific program, sponsored by the American Committee on Maternal Welfare, covering the medical, nursing and public health aspects of the maternal care team.

Further information can be obtained by writing to Mr. Donald F. Richardson, executive secretary, American Committee on Maternal Welfare, 116 South Michigan, Chicago 3, Illinois.

* * *

Dr. Wilton Halverson, director of the California State Department of Public Health, was elected president-elect of the American Public Health Association at the recent meeting of that organization in San Francisco. Dr. Halverson is at present on leave from his California office while making a special survey of health in South and Central America for the U.S. Public Health Service.

Dr. Gaylord W. Anderson of the University of Minnesota was installed as president of the A.P.H.A. at the meeting, to succeed Dr. William P. Shepard of San Francisco.

BOOK REVIEWS

POISONS—Their Isolation and Identification. By Frank Bamford, B.Sc., Late Director of the Medico-Legal Laboratory, Cairo. Third Edition, revised by C. P. Stewart, D.Sc., Ph.D., Reader in Clinical Chemistry, University of Edinburgh. 23 illustrations. The Blakiston Company, Philadelphia, 1951. 316 pages. $5.50.

As is indicated in the above title, this book has been revised by Dr. C. P. Stewart, who is toxicologist at the University of Edinburgh. Frank Bamford had had a very extensive experience as director of the medico-legal laboratory of the Government of Egypt, in Cairo, and his first edition of this book commanded immediate attention of toxicologists because of the clarity and completeness of the qualitative chemical procedures which he described for the isolation and identification of poisons. In this third edition, Dr. Stewart has kept the spirit of Bamford's previous two editions, and has added important recent information. Short-cuts are described, many pieces of laboratory equipment are described and illustrated with clear cuts, and the interpretation of symptoms for purposes of gaining clues which will guide the chemist in his search for the poison is especially helpful to the beginner. The book is intended only as a manual for the chemical laboratory and does not pretend to yield information concerning the clinical phases of toxicology, such as early diagnosis and treatment of cases of poisoning. Although it is a very satisfactory guide to the qualitative identification of poisons, there are few aids to the quantitative estimation of the amount of the poison present, except for alcohol, arsenic, lead, bismuth, borate, fluorine and zinc, and for an inadequate quantitative test for barbiturates. Another defect in the book is the amount of space devoted to general statements, especially concerning the toxic agents contained in many plants which are rarely the cause of poisoning, yet without specific tests which would be of aid in the identification of these poisons.

* * *

AN ATLAS OF ANATOMY—Third Edition. By J. C. Boileau Grant, M.C., M.B., Ch.B., F.R.C.S. (Edin.), Professor of Anatomy in the University of Toronto. **By Regions—Upper limb, abdomen, perineum, pelvis, lower limb, vertebrae, vertebral column, thorax, head and neck, cranial nerves and dermatomes.** The Williams and Wilkins Company, Baltimore, 1951. 657 pages (637 pages of figures and 20 pages of index). $12.00.

The passage of Grant's *An Atlas of Anatomy* into its third edition during the short space of some eight years is testimony to its general popularity and usefulness. The wide and ready acceptance of the work by student and practitioner alike is doubtless due to the emphasis given to the salient and important, rather than to an exhaustive treatment. Here the student finds not only illustrations of significant features of anatomy but their interpretation as provided by an experienced teacher.

The new edition is larger by some 70 new illustrations with improvement or replacement of many of the old figures. Of the new additions, the most noteworthy are the figures systematically revealing the arrangement of structures in the female pelvis and perineum, the new advances in the designation of the pulmobronchial segments, and the recent modifications of the dermatome patterns as derived from the clinical and experimental work of Keegan. These many additions have mended earlier deficiencies and immeasurably added to the value of the atlas to place it among the best available. Of deficiencies which still remain, there are two: First, there is little on the variations in division of the recurrent laryngeal nerve which is so important to surgery of the thyroid gland; second, the absence of roentgenograms which, for instance, are far superior in revealing the epiphyses of bones in the manner in which the student usually observes them.

A word should also be said on the great improvement in the reproduction of the illustrations. In earlier editions these were somewhat flat, lacking in contrast and brilliance. The sharpening up of the figures has done much for their clarity and they have gained in the third dimension.

In short, Grant's *Atlas* has gone from strength to strength showing advance with every edition to place it in the forepart of works of this nature. Student and practicing physician could make no better selection for their studies.

* * *

THE MANAGEMENT OF FRACTURES, DISLOCATIONS, AND SPRAINS—Fifth Edition. By John Albert Key, B.S., M.D., Clinical Professor of Orthopedic Surgery, Washington University School of Medicine; and H. Earle Conwell, M.D., F.A.C.S., Associate Professor of Orthopedic Surgery, University of Alabama School of Medicine. The C. V. Mosby Company, St. Louis, 1951. 1232 pages. $16.00.

This is one of the old standard American texts dealing with fractures, dislocations and sprains. It has been the standard work since 1934. The general formation of the text remains the same. It is profusely and well illustrated. The text is excellent in a general sense and the principles advocated are the result of extensive experience of the authors.

The composite ideas and experience of the two authors, it is an excellent text for anyone having to do with treatment of injuries of this type. Quite properly, the book tends toward conservatism. By following the directions and advice of this text in the care of injuries of the musculoskeletal system, certainly many unnecessary complications can be avoided.

The section on compound injuries is excellent. There is little emphasis on prophylactic antibiotic therapy. For example, the use of sulfa drugs locally to prevent infection is advised; no comment is made upon any of the newer antibiotics which have been developed during the past four years. There is, perhaps, not enough emphasis on the drainage of compound wounds in the management of compound injuries. The over-all discussion of principle, however, is excellent and bears careful study.

The various fractures occurring in the musculoskeletal system are covered adequately and completely with instructive illustrations. There can be no criticism of any portion of this book in that respect.

The section having to do with fractures of the forearm and elbow region emphasizes conservative management. The operative procedures illustrated, however, use either wire loops or the onlay plate and screw fixation principle. No mention is made of the use of intramedullary pin fixation for problems of this type. Apparently the only areas in which intramedullary nail fixation is advocated are in the tibial shaft and femoral shaft.

In the section on fractures of the hand, there is perhaps a bit too much emphasis on the use of traction and not quite enough on the maintenance of function. In inexperienced hands, a banjo-splint or a skeletal traction apparatus applied to an injured digit can lead to irreparable damage unless the principle of functional movement during the course of healing is followed through. The use of splints of this type predisposes to treating fractures of the hand on the basis of x-ray appearance instead of evaluation of the functional range of movement as an end result.

Generally, the section on injuries of the hip joint is excellent, but that portion having to do with fractures of the posterior acetabulum margin associated with dislocation of the hip does not mention immediate operation and reconstruction of the acetabular margin as a primary procedure. Conservative management of this type of injury has produced rather poor results in most instances. The results with reconstruction have been better. That part of the text dealing with treatment of the classical types of fracture of the hip is outstanding.

Always one of the classical portions of this book, the section on fractures of the shaft of the femur still is probably one of the major attractions. The same can be said for the section on fractures of the tibia and fibula.

In the discussion of fractures of the ankle area conservatism is stressed perhaps a bit more intensely than is necessary. There are certain positive indications for open repair of ankle joint injuries and these indications are not as clearly delineated as they should be.

Emphasis is laid upon the use of traction in the treatment of os calcis injury. There is a growing trend away from the use of this method generally.

* * *

METABOLIC METHODS—Clinical Procedures in the Study of Metabolic Functions. By C. Frank Consolazio, Chief of Biochemistry, United States Army, Medical Nutrition Laboratory, Chicago, Ill.; Robert E. Johnson, M.D., D.Phil. (Oxford), Professor and Head of the Department of Physiology, University of Illinois, Urbana, Illinois; and Evelyn Marek, M.A., Biochemist, United States Army Medical Nutrition Laboratory, Chicago, Illinois. The C. V. Mosby Company, St. Louis, 1951. 471 pages. $6.75.

This valuable book is essentially a reprint of the U. S. Army "Report of a Manual of Metabolic Methods" by the same authors. Only very slight changes in textual material have been made, such as the addition of two or three new procedures. Changes in the excellent illustrations of apparatus, diagrams, and alignment charts for calculations are also negligible. A section on preservation of animal tissues in the field for histological studies has been added, and the useful tables on the normal ranges of the composition of body fluids have been revised and enlarged. The principal improvement is the inclusion of a fairly extensive bibliography (through 1949), arranged by subject matter.

The book presents in detail a large number of procedures for conducting metabolic studies. Collection and storage of specimens and the use of spectrophotometers, fluorometers, and flame photometers are well discussed. Sections on microbiological methods, physiological measurements, and studies in the field are included. The treatment of techniques for metabolic wards and of clinical laboratory procedure such as tolerance and function tests is intentionally brief. The largest sections, dealing with the analysis of biochemical constituents, are comprehensive; some of the less common or more difficult procedures, however, such as the determination of protein-bound iodine, are relegated to the bibliography.

The methods listed are those which have been in use by the authors in the Medical Nutrition Laboratory. The careful details, the list of precautions, and the sample calculations included should be of value to those with limited training and experience in such methods. Alternative procedures, however, are rarely included. Such a presentation lacks flexibility, and there are no principles to guide those who might need to modify the procedure in any detail, or to use any apparatus other than that described. Despite a clear exposition of spectrophotometry and of spectrophotometers, filter photometers are barely mentioned, and the emphasis on transmittance rather than optical density is unfortunate. Advantage is not always taken of distinct improvements of original methods (as for example, the Frame, Russel and Wilhelmj modification of Folin's method for amino nitrogen). These are relatively minor drawbacks, however, and those engaged in clinical biochemical work or related fields should find it of great value.

* * *

FRONTAL LOBOTOMY AND AFFECTIVE BEHAVIOR—A Neurophysiological Analysis—John F. Fulton, M.D., Sterling Professor of Physiology, Yale University. W. W. Norton & Company, New York, 1951. 159 pages. $3.00.

This small book is based on the author's Salmon Lectures. Of the 129 pages of text, the general practitioner of medicine will profit most from the last 33, which embrace the rather meager knowledge that is at present available regarding frontal lobe function in man. Certainly every psychiatrist should be familiar with this material, which is becoming part of our basic knowledge of neurophysiology, and upon which psychosurgery rests.

The major portion of the book deals with experimental work in animals, as well as presenting an excellent historical background. It is, however, at times rather slow going, and perhaps with this book the lamentable practice so frequently pursued in reading detective novels, that is, reading the last chapter first, might be recommended.

* * *

PROCEEDINGS OF THE THIRD INTERNATIONAL CONGRESS OF THE INTERNATIONAL SOCIETY OF HEMATOLOGY, Cambridge, England, August 21-25, 1950—Carl V. Moore, U.S.A., Editor-in-Chief. Grune and Stratton, New York, 1951. 593 pages. Cloth bound, $10.00; paper bound, $8.00.

This is the first review volume of *Proceedings* although there have been previous conferences of this organization, in 1946 and in 1948. Included are 176 papers, many only in abstract. The majority of the papers are in English and many of those which are not have English summaries. The text is in four major divisions: I. Anemias and related subjects; II. Immunohematology; III. Leukemia and related diseases; IV. Coagulation, purpura and related subjects. In addition to careful indexing, within each section the papers are arranged according to topic so that reference is easy. Review papers are not included, but the book does contain several papers of general interest, such as Dameshek's on "Acquired Hemolytic Anemia."

Among the many interesting presentations is Owren's suggestion that vitamin B_{12} is not the complete therapy for pernicious anemia. He offered evidence that the level of prothrombin in the blood is not restored to normal by B_{12} therapy. An abnormal hemoglobin has also been demonstrated, and he feels this might be related to the macrocytosis which persists after treatment. Prothrombin and globin in the hemoglobin molecule apparently need a factor other than B_{12} for their normal formation in pernicious anemia.

It is refreshing to see in one volume papers collected from many countries, and to realize what fine work is being done elsewhere. Papers for the most part are in rather limited fields. Consequently, this volume will be of most value to those seriously interested in hematology, either in the clinical, laboratory, or investigative fields. Along with journals in this subject, it should be available for reference to all workers in the field of hematology.

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(The Council on Pharmacy and Chemistry of the American Medical Association has adopted the following statement of Actions and Uses and of Dosage for publication in connection with a description of Banthine Bromide for inclusion in New and Nonofficial Remedies)

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LIFE STRESSES CITED AS CHRONIC COLITIS FACTOR

Chronic ulcerative colitis, which is marked by severe and frequent diarrhea, when not traceable to a specific organism may be due to daily life stresses. In that event, the condition frequently can be cleared by doctor-patient understanding without resort to medication.

This was the experience reported by Drs. William J. Grace and Harold G. Wolff of the New York Hospital and Cornell University Medical College, New York, in a recent issue of the *Journal of the American Medical Association.*

Many theories have been advanced for the cause of the disease—including bacteria, viruses, enzymes, food allergies and vitamin deficiences. Long-term management of patients is difficult.

The New York doctors reported on the treatment of 19 cases in which the cause could not be determined by thorough diagnostic procedures. They found that in each patient the onset of the disease and every increase in severity of symptoms coincided with periods of stressful life circumstances.

Consequently, they viewed the ulcerative colitis in these cases as a stress disorder. Treatment was carried out on that theory, with the result that 11 patients were considerably improved, two slightly improved and six were unimproved. The procedure, they said, was found to be effective in approximately the same proportion reported by others using ostensibly different methods.

The treatment was carried out in interviews spaced at intervals of a few days or weeks, depending upon the needs of the subject. In the interview, the physician's role was that of a detached but interested, reliable, consistent and supporting confidant, the New York doctors said.

"The greatest benefit to the patient was a constructive physician-patient relationship," they added. "The patient was given opportunity and was encouraged to express with a free show of feelings, to a sympathetic and appreciative physician, the major complaints and difficulties in his life situation.

"Patients were given an explanation of the disease process, and this was repeated at suitable intervals, such as during periods of severe symptoms.

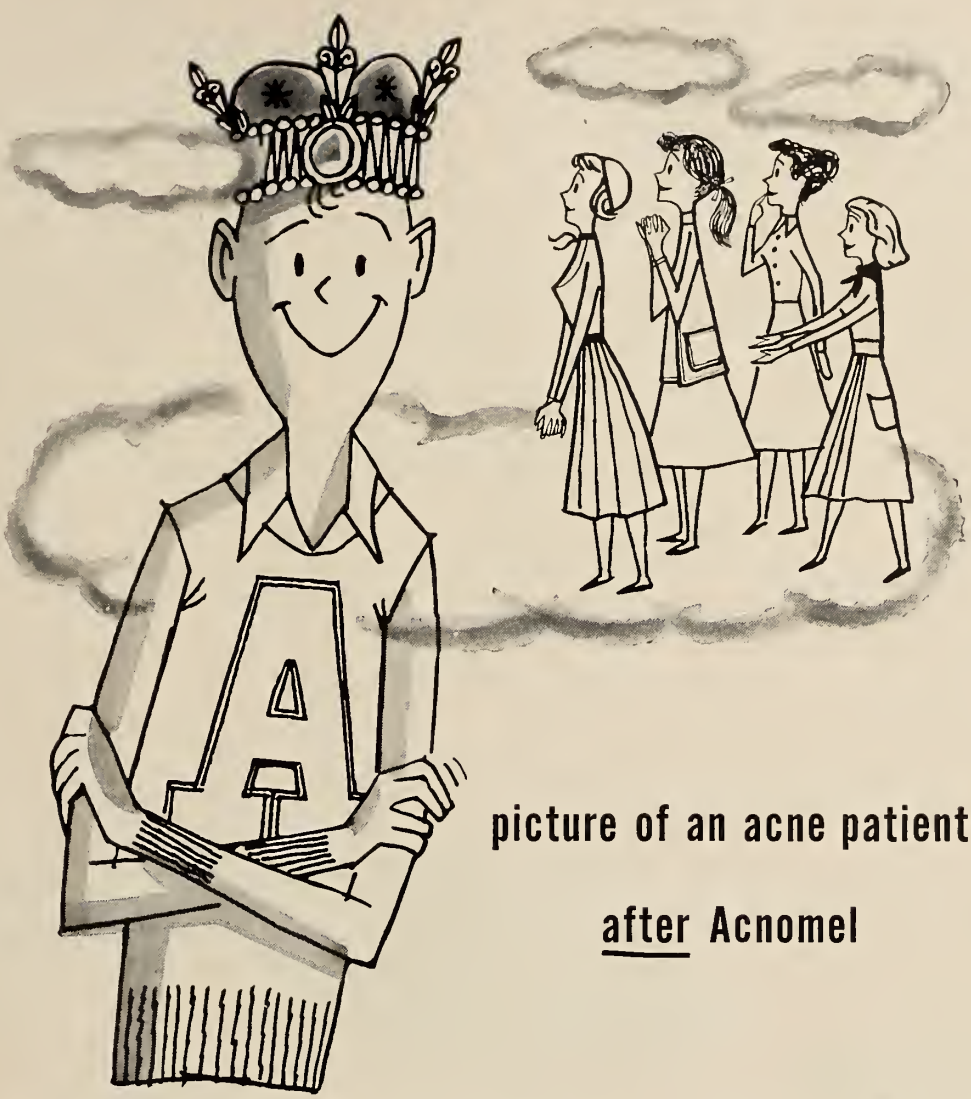
"The background, the family, the cultural setting, the emotional responses, and the aims and ambitions of the patient were explored in order to understand the patient and help him to understand himself.

"The patients were instructed in means of recognizing their own manifestations of accumulating emotional tension, and encouraged to accept them for what they represented and to attempt to deal with the circumstances leading to their presence.

"Finally, rearrangement in the environment was attempted. When successful, it produced dramatic results in terms of symptomatic relief. Unfortunately, however, this was not always feasible, often because of the lack of a practical maneuver, lack of cooperation of the family or because of the inability of the patient to accept any drastic change.

"No medication was given to the patient. The

(Continued on Page 56)



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LIFE STRESSES CITED AS CHRONIC COLITIS FACTOR

(Continued from Page 50)

management was worked out *with* the patient. The patient's ability to utilize his own resources determined the final result. The physician guided him, helped him understand why he was getting into difficulty and supported him when he was trying to alter his environment or attitudes."

In the case of a 36-year-old nurse, the situation cleared when she became able to accept her husband and his faults. A 35-year-old woman improved when she developed a more tolerant attitude toward her husband and children. A critical mother-in-law was a factor in another instance.

A.M.A. SUPPORTS BILL BANNING SALE OF FIREWORKS

The American Medical Association has filed a statement with the House Judiciary Committee supporting its bills restricting the sale of fireworks.

The statement said that the medical profession for many years "has been concerned with the serious menace to life and health resulting from the use of fireworks." It added that the association is in favor of proposals such as the bills under consideration, "which are designed to alleviate health hazards of this type." The bills would prohibit the shipment of fireworks into any state or political subdivision in which their sale is prohibited, unless intended for public displays or other purposes specifically authorized by law.

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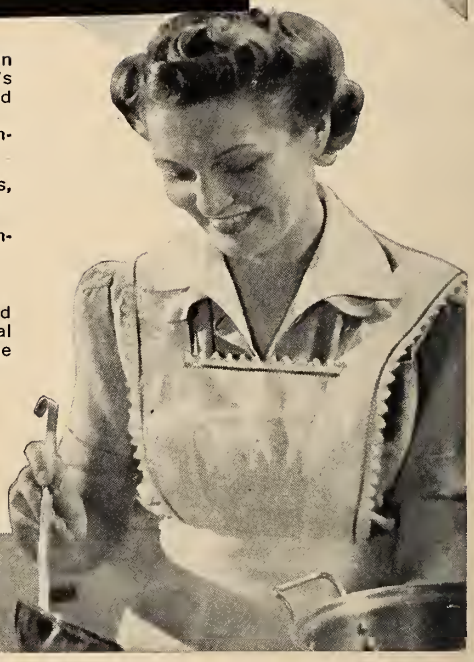

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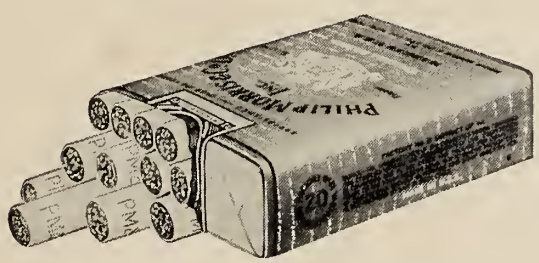

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SERIOUS VIRUS INFECTION TRANSMITTED BY DOPE ADDICTS

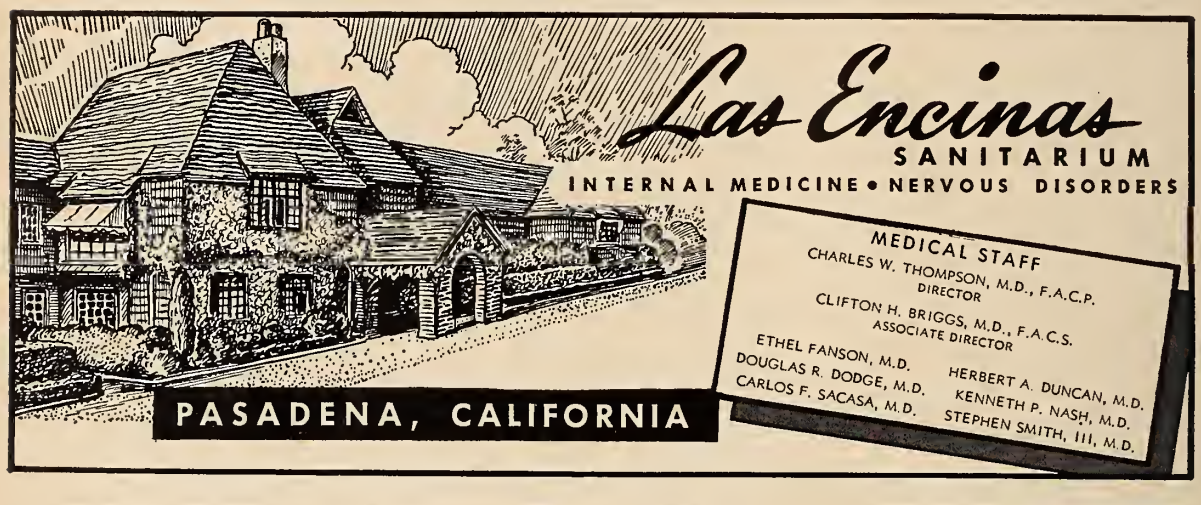
The transmission of a serious virus inflammation of the liver as a result of the communal use of hypodermic needles by dope addicts was reported in a recent issue of the *Journal of the American Medical Association.*

This additional hazard of dope addiction was reported by Drs. Emanuel Appelbaum and Mennasch Kalkstein, of New York City, after studying the case histories of nine heroin addicts suffering from viral hepatitis, each of whom had received intravenous injections of the drug.

"The hypodermic outfit, knowns as 'the works,' is never sterilized and is passed around from one addict to another," the doctors stated. "It is obvious that this method lends itself to the transfer of infectious agents from one addict to another.

"Attention is thus directed to another hazard of narcotic addiction, namely the transmission of a virus infection. The public health implications of this extraordinary manner of spreading hepatitis cannot therefore be overemphasized.

"This problem assumes particular importance at this time because of the recent exposure of the widespread existence of diacetylmorphine addiction, especially among adolescents."



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PRIMARY CANCER OF APPENDIX NOT A RARITY, SAYS DOCTOR

Cancer originating in the appendix, although not widely known, is not a rarity, according to a report in a recent issue of the *Journal of the American Medical Association.*

One hundred and sixteen cases of the disease have been reported from only seven sources during the last few years, the author of the article, Dr. Robert J. Sillery, stated. Dr. Sillery is attached to the U. S. Public Health Service Hospital, New Orleans.

Because it usually produces no symptoms and little prognostic information is available to the clinician, cancer of the appendix is usually not discovered until the appendix has been removed for other reasons, the report said.

"Many of the reported cases initially presented the clinical signs and symptoms of acute appendicitis; hence, carcinoma of the appendix must not be forgotten in the differential diagnosis of an acute abdominal crisis," he stressed.

From the information available, Dr. Sillery said, the removal of cancerous appendix is seldom followed by rapid recurrence of cancer and the spread of the disease to other organs. The rate of cure is relatively high, he added.

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(as ferrous sulfate exsic.)	230 mg.	690 mg.
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PREVENTIVE MEASURES URGED AS SAFEGUARD AGAINST STROKE

The best way to avoid a stroke, third among leading causes of death in this country, is to recognize its possibility and make physical readjustments that may help to stave it off.

That advice was given by Dr. William Bolton of Chicago, in a recent issue of *Today's Health*, published by the American Medical Association.

In the absence of serious systemic diseases such as diabetes and syphilis, there is not much chance of the average person having a stroke before 45 years of age, according to Dr. Bolton, associate editor of the magazine. But, virtually everyone past middle age is a possible candidate. The following precautions were recommended in the article:

1. Obtain prompt, active treatment of systemic diseases.
2. Do not become or remain overweight.
3. Watch blood pressure that tends to become high.
4. Obtain regular physical checkups.

"Strokes vary from widespread, devastating ones that bludgeon their victims into oblivion to tiny ones producing such vague, indefinite signs that they often escape immediate detection," he wrote. "The basic cause in both extremes is identical: escape of blood into the brain tissue. The amount of bleeding and its location near to or far from vital centers or important nerve pathways are the chief factors that determine severity in strokes.

"Not all strokes are the result of direct escape of fluid from blood vessels into brain tissue. Some physicians lean strongly to the belief that temporary spasm in a blood vessel may be a common cause.

"Another fairly common event is formation of a clot within one or more of the tiny arteries in the brain.

"There is increased possibility of stroke in certain diseases."

In 1900, stroke was seventh among the chief causes of death. The general opinion is that a stroke is usually the result of a combination of circumstances.

"It is basically a disorder of advancing age, of tissue changes in the body, and that fact explains why it has come into prominence in recent years," according to Dr. Bolton. "It may become even more significant, since an ever increasing number of our population are older people."

To the average person, he said, the term stroke applies to the obvious result, the paralysis of facial muscles or arm or leg muscles, often on only one side of the body. In the nonfatal cases, however, the victim may make a gradual comeback after the initial shock, which is usually accompanied by varying periods of unconsciousness.

"The least severe strokes consist of little more than oozing in so-called 'silent' areas of the brain," Dr. Bolton declared. "Many a person has six or eight of these, perhaps even more, before effects become evident. In numerous instances, examination of the brain following death from an entirely

(Continued on Page 74)

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PREVENTIVE MEASURES URGED AS SAFEGUARD AGAINST STROKE

(Continued from Page 70)

different cause, such as pneumonia or heart disease, has revealed many areas in which little strokes had occurred years earlier.

"Some authorities feel that this form of stroke is commoner than even many physicians suspect."

There is hope that prevention of stroke will eventually be worked out, he pointed out. The first bit of evidence is the development of a special preparation that reduces the fragility of small blood vessels and capillaries. Although still in the experimental stage, this substance, known as rutin, has been helpful in controlling blood leakage in certain disorders.

A second hopeful development is the introduction of special preparations that keep clots from occurring within blood vessels. They are known as heparin and dicumarol. These substances have already been accepted as extremely effective aids in the prevention of clots in leg veins as well as in the blood vessels of the heart. They have greatly reduced the incidence of this distressing, and sometimes fatal, sequel formerly observed after operations, and have been credited with aiding in the recovery of many patients with coronary disorders.

However, like rutin, the success of these preparations is still problematic as far as stroke is concerned, he said.

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MEDICAL CARE RELATIVELY CHEAPER THAN IN 1935-39

The American Medical Association reported recently that the price of medical care, including drugs, hospital room rates and physician and dental services, was relatively 14 per cent cheaper in 1950 than during 1935-39.

This was revealed in the Consumers' Price Index, compiled by the U. S. Bureau of Labor Statistics.

The bureau's index indicated a 72 per cent rise in the cost of living since the 1935-39 base period while, at the same time, showing that medical care prices rose only 48 per cent.

The increase for food, the index showed, was 104 per cent; apparel 88 per cent; rent 31 per cent; fuel, electricity and refrigeration 41 per cent; house furnishings 90 per cent, and 57 per cent for the items which the Bureau of Labor Statistics classified as miscellaneous. Only two of these items—rents, and fuel, electricity and refrigeration — rose less rapidly than medical care prices.

The 72 per cent rise in the cost of living as compared with only a 48 per cent rise in medical care prices indicates that for every $1 paid for goods and services generally in 1935-39, the 1950 consumer had to pay $1.72. On the other hand, the medical care purchased for $1 in 1935-39 cost only $1.48 in 1950.

An analysis of the index discloses further that a dollar in 1950 could buy 68 cents worth of medical care but only 58 cents worth of all goods and services, or 86 per cent as much. The 1950 purchasing power of the dollar was 86 per cent as high in terms

(Continued on Page 81)

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MEDICAL CARE RELATIVELY CHEAPER THAN IN 1935-39

(Continued from Page 80)

of goods and services, generally, as it was in terms of medical care prices only. Thus, in terms of the purchasing power of the 1950 dollar, medical care was relatively 14 per cent cheaper than in 1935-39.

Physicians' fees, according to the index, rose 40 per cent or only a little more than half as rapidly as the entire cost of living, which rose 72 per cent.

Only hospital room rates, which increased 135 per cent, have risen faster than the entire Consumers' Price Index.

"The high hospital rates," an A.M.A. study of the Consumers' Price Index said, "reflects the fact that hospitals are singularly exposed to the forces of inflation."

Commenting on the relatively cheaper medical care prices today, Dr. John W. Cline, San Francisco, president of the A.M.A., said that "physicians recognize that the cost of medical care, especially hospital care, is a serious budget item for many persons. Therefore, the doctors are strongly supporting various voluntary pre-payment insurance plans to help meet these costs."

"The fact is, however," Dr. Cline continued, "that, as shown by official government statistics, medical care prices today, as compared with the prices of all goods and services, are relatively less than they were 15 years ago."

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Index to Volume 75, July-December, 1951

KEY TO ABBREVIATIONS USED

(Or.)—Original Article
(Ed.)—Editorial.
(CMA)—California Medical Association
(CR)—Case Report
(I)—Information
(LE)—Letters to the Editor

AUTHOR INDEX

A

Adames, Antonio A., *Holtville* ... 341
Adams, John E., *San Francisco* ... 321
Aijian, H. Schuyler, *Los Angeles* ... 416
Albright, Robert W., *Long Beach* ... 368
Allen, James R., *San Francisco* ... 300
Anderson, Forrest N., *Van Nuys* ... 213
Austin, Elizabeth, *Los Angeles* ... 15

B

Beck, M. Dorthy, *Berkeley* ... 94
Bell, H. Glenn, *San Francisco* ... 276
Bierman, Howard R., *San Francisco* ... 26
Bogart, William M., *Martinez* ... 101
Boldrey, Edwin, *San Francisco* ... 281
Bond, V. P., *San Francisco* ... 400
Bower, Albert G., *Los Angeles* ... 15
Brady, Peter R., *San Francisco* ... 354
Brainerd, Henry, *San Francisco* ... 290
Browell, Bernadette, *Los Angeles* ... 416
Bruyn, Henry B., *San Francisco* ... 290
Burnham, DeWitt K., *San Francisco* ... 412

C

Charnock, Donald A., *Los Angeles* ... 421
Cohn, Harry, *San Diego* ... 341
Cozen, Lewis, *Los Angeles* ... 362

D

Dail, Clarence W., *Los Angeles* ... 15, 217
Dennis, James L., *Galveston, Texas* ... 408
Dougherty, John A., *Oakland* ... 48

E

Engleman, Ephraim P., *San Francisco* ... 1
Epstein, Norman N., *San Francisco* ... 300
Evans, Edward R., *Pasadena* ... 271

F

Feigen, Gerald Mason, *San Francisco* ... 223
Feldman, Fred F., *Los Angeles* ... 324
Fishler, M. C., *San Francisco* ... 400
Flynn, Stephen E., *Coronado* ... 97
Fowler, James T., *Long Beach* ... 369
Franklin, Roland G., *San Diego* ... 196
Furst, Arthur, *San Francisco* ... 26

G

Garland, L. Henry, *San Francisco* ... 265, 357
Gerbode, Frank, *San Francisco* ... 185
Geshelin, H., *Los Angeles* ... 93
Gilman, A., *San Francisco* ... 105
Graves, Clifford L., *San Diego* ... 305
Gundrum, Lawrence K., *Los Angeles* ... 207

H

Harris, Marvin S., *Los Angeles* ... 85
Hartman, Deane C., *Los Angeles* ... 279
Heck, Walter E., *San Francisco* ... 430
Henley, R. Bruce, *Oakland* ... 276
Heyd, Charles Gordon, *New York* ... 81
Hill, Malcolm R., *Los Angeles* ... 89
Hoffman, Stanley H., *Los Angeles* ... 40
Hollister, Arthur C., *Berkeley* ... 94
Hovsepian, Deron, *Pasadena* ... 359
Huddleston, O. L., *Los Angeles* ... 15
Hutner, Laurence M., *Beverly Hills* ... 309

J

Jacobs, Lewis G., *Oakland* ... 221
Joergenson, E. J., *Glendale* ... 395

K

Karp, L., *San Francisco* ... 105
Keddie, Frances, *Palo Alto* ... 6
Kelly, Keith H., *San Francisco* ... 26
Kinsell, Laurance W., *Oakland* ... 11
Kirtland, Howard B., Jr., *San Diego* ... 44
Kroeger, C. R., *El Centro* ... 341
Krohn, Leon, *Los Angeles* ... 211
Krupp, Marcus A., *Palo Alto* ... 6
Kuffel, Mark J., *Long Beach* ... 368
Kunkel, Peter, *San Francisco* ... 1

L

Lamb, Gordon R., *Oakland* ... 11
Lawrence, Lester B., *Oakland* ... 296
Leggo, Christopher, *Crockett* ... 35
Leivers, Emery, *Woodland* ... 351
Lennette, Edwin B., *Berkeley* ... 189
Lodmell, Elmer A., *San Francisco* ... 354
Longmire, William P., Jr., *Los Angeles* ... 40
Longshore, W. Allen, *Berkeley* ... 189
Lowenhaupt, Elizabeth, *San Francisco* ... 26
Lyon, Richards P., *San Francisco* ... 202

M

Maier, Herbert C., *New York, N.Y.* ... 392
Manwaring, W. H., *Palo Alto* ... 433
McGinnis, J. J., *San Francisco* ... 365
McNaught, Robert C., *San Francisco* ... 430
Melody, George F., *San Francisco* ... 425
Miller, Earl R., *San Francisco* ... 202
Moffitt, Herbert C., Jr., *San Francisco* ... 306
Molyneaux, M. Glenn, *San Francisco* ... 1
Mortenson, Earl, *Fresno* ... 94
Muller, William H., Jr., *Los Angeles* ... 285

N

Nation, Earl F., *Pasadena* ... 219
Newell, R. R., *San Francisco* ... 433
Newman, Ben A., *Los Angeles* ... 324

O

Oechsli, Waldo R., *Los Angeles* ... 341

P

Parsons, Robert J., *Oakland* ... 101
Perlman, Frank, *Portland, Oregon* ... 199
Puziss, I., *San Francisco* ... 105

R

Richmond, Thomas E., *Oakland* 221
Rigby, Elmer C., *Los Angeles* 45
Riggall, E. R., *San Francisco* 365
Rinehart, James F., *San Francisco* 335
Ross, Mathew, *Beverly Hills* 332
Rossman, Phillip L., *Los Angeles* 45
Rowe, Albert, Jr., *Oakland* 11
Rowe, Charles A., *Oakland* 106
Rutherford, Miriam H., *Oakland* 98

S

Saier, Milton, *Palo Alto* 6
Shimkin, Michael B., *San Francisco* 26
Simon, Alexander, *San Francisco* 73
Sisson, Merrell A., *San Francisco* 265
Skinner, Morgan, *Chula Vista* 305
Smith, Charles E., *Berkeley* 385
Smith, Clyn, Jr., *Monterey* 101
Smith, Donald R., *San Francisco* 202
Smith, J., *San Francisco* 105
Snell, A. M., *Palo Alto* 6
Stein, Charles F., *Fresno* 94
Steinbach, Howard L., *San Francisco* 202
Sullivan, W. H., *San Francisco* 400

T

Tanner, Ralph, *Palo Alto* 6
Taylor, Fletcher B., *Oakland* 11
Torassa, George L., *San Francisco* 345
Tucker, James M., *Oakland* 221

W

Watson, Blake H., *Los Angeles* 261
Waxman, A., *Los Angeles* 93
Weibel, Laurel H., Los Angeles 395
Welsh, Joseph E., Jr., *San Francisco* 1
Woods, Ward W., *San Diego* 196

SUBJECT INDEX

A

Aberrant Pancreatic Tissue in the Gastric Wall, Lewis G. Jacobs, Thomas E. Richmond, and James M. Tucker, Oakland (CR) 221

ACTH and Cortisone, Experience with, in Private Practice, Albert Rowe, Jr., Gordon R. Lamb, Fletcher B. Taylor, and Laurance W. Kinsell, Oakland (Or.) 11

ACTH, Eosinophilic Pneumonia (Loeffler's Syndrome): Report of a Case Treated with, E. R. Riggall and J. J. McGinnis, San Francisco (CR) 365

Adenotonsillectomy—Indications and Applications of Surgical Techniques, Emery Leivers, Woodland (Or.) 351

Aging, Psychological Problems of, Alexander Simon, San Francisco (Or.) 73

Alesen, Lewis A., President-Elect (CMA) 53

Allergic Injury, The Role of the Connective Tissue Ground Substances (Mucopolysaccharides) in, James F. Rinehart, San Francisco (Or.) 335

A.M.A. 1951 Meeting (Ed.) 52

A.M.A. Clinical Session (Ed.) 370

Anal Infections Encountered in General Practice, Malcolm R. Hill, Los Angeles (Or.) 89

Anemias, Diagnosis of the Hemolytic, Edward R. Evans, Pasadena (Or.) 271

Anesthesia, Spinal, Progressive Adhesive Arachnoiditis Following, Ward W. Woods and Roland G. Franklin, San Diego (Or.) 196

Annual Meeting, Special Announcement (CMA) 311

Anoxia, The Treatment of Craniocerebral Injuries and the Prevention of, John E. Adams, San Francisco (Or.) 321

Antihistamine in the Prevention of Serum Reaction Following Prophylactic Injection of Tetanus Antitoxin, A. Waxman and H. Geshelin, Los Angeles (Or.) 93

Antihistaminic Nasal Solutions, Experimental and Clinical Observations on, Lawrence K. Gundrum, Los Angeles (Or.) 207

Apoplexy in Young Adults—Diagnostic and Therapeutic Observations, Edwin Boldrey, San Francisco (Or.) 281

Arachnoiditis, Progressive Adhesive, Following Spinal Anesthesia, Ward W. Woods and Roland G. Franklin, San Diego (Or.) 196

Asthma and Cardiac Dyspnea—A Differential Diagnosis, Frank Perlman, Portland, Oregon (Or.) 199

Asthma, Bronchial, Cortisone in Treatment of, Marvin S. Harris, Los Angeles (Or.) 85

Atomic Bomb, The Physician and the, V. P. Bond, M. C. Fishler, and W. H. Sullivan, San Francisco (Or.) 400

Attitudes Toward the Dubious Compensation Claim, Christopher Leggo, Crockett (Or.) 35

B

Bacterial Agglutinins in Cancer, W. H. Manwaring, Palo Alto (LE) 433

Bowel Tumors, Small, A Study of—With Special Emphasis on Clinical Aspects, E. J. Joergenson, Glendale, and Laurel A. Weibel, Los Angeles (Or.) 395

"Breathing, Glossopharyngeal" by Paralyzed Patients—A Preliminary Report, Clarence W. Dail, Los Angeles (Or.) 217

Bronchiogenic Cysts, Elmer C. Rigby and Phillip L. Rossman, Los Angeles (CR) 45

Burns, Crushed Ice Packing in the Treatment of, Stephen E. Flynn, Coronado (Or.) 97

C

C.M.A. Annual Meeting, Special Announcement (C.M.A.) 311, 376

C.M.A. Constitution and By-Laws (C.M.A.) 231

C.M.A. Constitution and By-Laws (Ed.) 225

C.M.A. House of Delegates Proceedings (CMA) 110

C.M.A. President-Elect (CMA) 53

C.M.A. Public Relations (CMA) 310

C.M.A. Public Relations Service Available to County Societies (CMA) 371

Cancer, Breast, Radiation Therapy in, A Preliminary Report on the Application of a Technique of the McWhirter Type, Elmer A. Lodmell and Peter R. Brady, San Francisco (Or.) 354

Cancer Cures, Cancer Commission Statement on (CMA) 62

Cancer, Gastric and Pulmonary, Effectiveness of Smear Technique in Detection of, H. Schuyler Aijian and Bernadette Browell, Los Angeles (Or.) 416

Cancer, Metastatic Breast, in Bone, The Treatment of, Merrell A. Sisson, and L. Henry Garland, San Francisco (Or.) 265

Cancer, Thyroid, Incidence and Importance of, Laurence M. Hutner, Beverly Hills (LE) 309

Cardiac Dyspnea and Asthma—A Differential Diagnosis, Frank Perlman, Portland, Oregon (Or.) 199

Change in Diagnostic Laboratory Service (I) 317

Change in Method of Authorization for Home-Town Care of Veterans (CMA) 438

Child Psychiatry, Some Viewpoints on, Forrest N. Anderson, Van Nuys (Or.) 213

Circumcaval Ureter, with Report of Case, John A. Dougherty, Oakland (CR) 48

Circumcision, The Pros and Cons of Routine, Deron Hovsepian, Pasadena (Or.) 359

Civilian Medical Care to Army Personnel (I) 180

Coccidioidal Infections, Pulmonary, Diagnosis of, Charles E. Smith, Berkeley (Or.) 385

Colles' Fracture, A Method of Maintaining Reduction, Lewis Cozen, Los Angeles (Or.) 362

Compensation Claim, Attitudes Toward the Dubious, Christopher Leggo, Crockett (Or.) 35

Constitution and By-Laws (CMA) 231
Cortisone and ACTH, Experience with, in a Private Clinic, Marcus A. Krupp, Milton Saier, Frances Keddie, Ralph Tanner, and A. M. Snell, Palo Alto (Or.) .. 6
Cortisone and ACTH, Experience with, in Private Practice, Albert Rowe, Jr., Gordon R. Lamb, Fletcher B. Taylor, and Laurance W. Kinsell, Oakland (Or.) 11
Cortisone by Mouth, Erythema Nodosum—Treatment with, Robert W. Albright and Mark J. Kuffel, Long Beach (CR) 368
Cortisone, Given Orally, Experiences with, Ephraim P. Engleman, Peter Kunkel, Joseph E. Welsh, Jr., and M. Glenn Molyneaux, San Francisco (Or.) 1
Cortisone in the Treatment of Bronchial Asthma, Marvin S. Harris, Los Angeles (Or.) 85
Cortisone, The Topical and Systemic Use of, in Dermatology, Ben A. Newman and Fred F. Feldman, Los Angeles (Or.) 324
Cortisone, Waterhouse-Fridcrickson Syndrome, Recovery of a Case Treated With, James T. Fowler, Long Beach (CR) 369
Crushed Ice Packing in the Treatment of Burns, Stephen E. Flynn, Coronado (Or.) 97
Current Concepts of Primary Dysmenorrhea, Mathew Ross, Beverly Hills (Or.) 332

D

Dermatitis of the Hands in Industry, Norman N. Epstein and James R. Allen, San Francisco (Or.) 300
Dermatology, The Topical and Systemic Use of Cortisone in, Ben A. Newman and Fred F. Feldman, Los Angeles (Or.) 324
Dermoid Cyst of the Omentum, Howard B. Kirtland, Jr., San Diego (CR) 44
Diagnosis of Pulmonary Coccidioidal Infections, Charles E. Smith, Berkeley (Or.) 385
Diagnosis of the Hemolytic Anemias, Edward R. Evans, Pasadena (Or.) 271
Diagnostic Laboratory Service, Change in (I) 317
Diarrheal Disease, The Organization and Operation of a Study of in Fresno County, William F. Stein, Fresno, M. Dorthy Beck and Arthur C. Hollister, Jr., Berkeley, and Earl Mortenson, Fresno (Or.) 94
Diphtheria: The Present Day Problem, Henry Brainerd and Henry B. Bruyn, San Francisco (Or.) 290
Dr. Murray Heads A.M.A. Board of Trustees (CMA) 54
Dysmenorrhea, Primary, Current Concepts of, Mathew Ross, Beverly Hills (Or.) 322

E

Ectopic Pregnancy, Penicillin as an Etiologic Factor in, Leon Krohn, Los Angeles (Or.) 211
Effectiveness of Smear Technique in Detection of Pulmonary and Gastric Cancer, H. Schuyler Aijian and Bernadette Browell, Los Angeles (Or.) 416
Encephalitis, Western Equine and St. Louis, in Man, California, 1945-1950, Edwin H. Lennette and W. Allen Longshore, Berkeley (Or.) 189
Endogenous Cholesterol, W. H. Manwaring, Palo Alto (LE) 433
Enuresis, Donald A. Charnock, Los Angeles (Or.) 421
Eosinophilic Pneumonia (Loeffler's Syndrome): Report of a Case Treated with ACTH, E. R. Riggall and J. J. McGinnis, San Francisco (CR) 365
Erythema Nodosum—Treatment with Cortisone by Mouth, Robert W. Albright and Mark J. Kuffel, Long Beach (CR) 368
Experience with ACTH and Cortisone in Private Practice, Albert Rowe, Jr., Gordon R. Lamb, Fletcher B. Taylor, and Laurance W. Kinsell, Oakland (Or.) 11
Experience with Cortisone and ACTH in a Private Clinic, Marcus A. Krupp, Milton Saier, Frances Keddie, Ralph Tanner, and A. M. Snell, Palo Alto (Or.) 6
Experiences with Cortisone given Orally, Ephraim P. Engleman, Peter Kunkel, Joseph E. Welsh, Jr., and M. Glenn Molyneaux, San Francisco (Or.) 1
Experimental Investigations and Clinical Observations on Antihistaminic Nasal Solutions, Lawrence K. Gundrum, Los Angeles (Or.) 207
Extraperitoneal Pneumography—A Preliminary Report, Howard L. Steinbach, Richards P. Lyon, Earl R. Miller, and Donald R. Smith, San Francisco (Or.) 202

F

Fistulas Following Gastrectomy, R. Bruce Henley, Oakland, and H. Glenn Bell, San Francisco (Or.) 276

G

Gastrectomy, Fistulas Following, R. Bruce Henley, Oakland, and H. Glenn Bell, San Francisco (Or.) 276
General Practitioner-Specialist Cooperation in an Obstetrical Department, Blake H. Watson, Los Angeles (Or.) 261
Giant Intracanalicular Fibroadenoma, with Report of Five Cases, Clyn Smith, Jr., Monterey; Robert J. Parsons, Oakland; and William M. Bogart, Martinez (Or.) 101
"Glossopharyngeal Breathing" by Paralyzed Patients—A Preliminary Report, Clarence W. Dail, Los Angeles (Or.) 217

H

Head Injuries, Treatment of, Lester B. Lawrence, Oakland (Or.) 296
Heart Disease, The Surgical Treatment of Acquired, Frank Gerbode, San Francisco (Or.) 185
Hemolytic Anemias, Diagnosis of, Edward R. Evans, Pasadena (Or.) 271
Hemorrhage, Primary Postpartum, George F. Melody, San Francisco (Or.) 425
House of Delegates Proceedings, C.M.A. (CMA) 110

I

Incidence and Importance of Thyroid Cancer, Laurence M. Hutner, Beverly Hills (LE) 309
Infectious Mononucleosis—Report of Four Cases, Herbert C. Moffitt, Jr., San Francisco (CR) 306
Insulin and Insulin Mixtures—NPH Insulin, DeWitt K. Burnham, San Francisco (Or.) 412
Intensive X-Ray Survey for Tuberculosis in a Rural County, Waldo R. Oechsli, Los Angeles; C. R. Kroeger, El Centro; Harry Cohn, San Diego, and Antonio A. Adames, Holtville (Or.) 341

J

Juvenile Fibroma, The Transpalatal Approach for, Walter E. Heck and Robert C. McNaught, San Francisco (CR) 430

L

Laboratory Service, Diagnostic, Change in (I) 317
Loeffler's Syndrome, Eosinophilic Pneumonia: Report of a Case Treated with ACTH, E. R. Riggall and J. J. McGinnis, San Francisco (CR) 365

M

Malaria in Veterans Returning from Korea (Ed.) 432
Medical Care Costs Rise Far Less than Other Family Budget Items (I) 317
Medical Care on the March (Ed.) 308
Mitral Stenosis, The Surgical Treatment of, William H. Muller, Jr., Los Angeles (Or.) 285
Murray, Dwight H., A Tribute to (CMA) 230
Murray, Dwight H., Heads A.M.A. Board of Trustees (CMA) 54

N

Neoplastic Diseases, Trisethylene-Imino-*s*-Triazine (Triethylene Melamine or TEM) in the Treatment of, Michael B. Shimkin, Howard R. Bierman, Keith H. Kelly, Elizabeth Lowenhaupt, and Arthur Furst, San Francisco (Or.) ... 26

New Study of C.P.S., A (Ed.) ... 51

Non-Group Subscriber, The—A Blue Shield Problem, Charles Gordon Heyd, New York (Or.) ... 81

Non-Tuberculous Psoas Abscess, Clifford L. Graves, San Diego, and Morgan Skinner, Chula Vista (CR) ... 305

O

Obstetrical Department, Specialist-General Practitioner Cooperation in, Blake H. Watson, Los Angeles (Or.) ..261

Officially Yours (Ed.) ... 109

Organization and Operation of a Study of Diarrheal Disease in Fresno County, William F. Stein, Fresno; M. Dorthy Beck and Arthur C. Hollister, Jr., Berkeley, and Earl Mortenson, Fresno (Or.) ... 94

Osteochondritis Dissecans of the Supratrochlear Septum, Charles A. Rowe, Oakland (CR) ... 106

Otitis Media, Acute, Proper Use of Antibiotics in Treatment of, Miriam H. Rutherford, Oakland (Or.) ... 98

P

Paralyzed Patients, "Glossopharyngeal Breathing" by, Clarence W. Dail, Los Angeles (Or.) ... 217

Penicillin as an Etiologic Factor in Ectopic Pregnancy, Leon Krohn, Los Angeles (Or.) ... 211

Pheochromocytoma, Report of a Case with Preoperative Diagnosis and Removal Through Anterior Abdominal Incision, Stanley H. Hoffman and William P. Longmire, Jr., Los Angeles (CR) ... 40

Physician and the Atomic Bomb, The, V. P. Bond, M. C. Fishler, and W. H. Sullivan, San Francisco (Or.) ... 400

Pneumography, Extraperitoneal—A Preliminary Report, Howard L. Steinbach, Richards P. Lyon, Earl R. Miller, and Donald R. Smith, San Francisco (Or.) ... 202

Poliomyelitis, Use of the Rocking Bed to Augment Ventilation in Patients with, Clarence W. Dail, Elizabeth Austin, O. L. Huddleston, and Albert G. Bower, Los Angeles (Or.) ... 15

Pregnancy, Ectopic, Penicillin as an Etiologic Factor in, Leon Krohn, Los Angeles (Or.) ... 211

Primary Postpartum Hemorrhage, George F. Melody, San Francisco (Or.) ... 425

Progressive Adhesive Arachnoiditis Following Spinal Anesthesia, Ward W. Woods and Roland G. Franklin, San Diego (Or.) ... 196

Proper Use of Antibiotics in Treatment of Acute Otitis Media, Miriam H. Rutherford, Oakland (Or.) ... 98

Pros and Cons of Routine Circumcision, The, Deron Hovsepian, Pasadena (Or.) ... 359

Psoas Abscess, Non-Tuberculous, Clifford L. Graves, San Diego and Morgan Skinner, Chula Vista (CR) ... 305

Psychiatry, Child, Some Viewpoints on, Forrest N. Anderson, Van Nuys (Or.) ... 213

Psychological Problems of Aging, Alexander Simon, San Francisco (Or.) ... 73

Pterygia, Pseudopterygia, and Symblepharon, Use of Free Grafts in Correction of, Deane C. Hartman, Los Angeles (Or.) ... 279

Public Relations, C.M.A. (CMA) ... 310

Public Relations, C.M.A., Service Available to County Societies (CMA) ... 371

R

Radiation Therapy in Breast Cancer, A Preliminary Report on the Application of a Technique of the McWhirter Type, Elmer A. Lodmell and Peter R. Brady, San Francisco (Or.) ... 354

Rectal Hemorrhage Caused by Injection Slough, Gerald Mason Feigen, San Francisco (CR) ... 223

Renal Hemangioma, Earl F. Nation, Pasadena (CR) ... 219

Renal Parenchyma, Surgical Principles of Incising the, George L. Torassa, San Francisco (Or.) ... 345

"Reportable Diseases," New Form for Reporting (I) ... 257

Rh Factor in Rural Practice—Responsibility of the General Practitioner, James L. Dennis, Galveston, Texas (Or.) ... 408

Rocking Bed, Use of, to Augment Ventilation in Patients with Poliomyelitis, Clarence W. Dail, Elizabeth Austin, O. L. Huddleston, and Albert G. Bower, Los Angeles (Or.) ... 15

Seventy-Five Per Cent of Korea Wounded Return to Duty (I) ... 317

Role of the Connective Tissue Ground Substances (Mucopolysaccharides) in Allergic Injury, James F. Rinehart, San Francisco (Or.) ... 335

S

Smear Technique, Effectiveness of, in Detection of Pulmonary and Gastric Cancer, H. Schuyler Aijian and Bernadette Browell, Los Angeles (Or.) ... 416

Some Recent Advances in Thoracic Surgery, Herbert C. Maier, New York, N.Y. (Or.) ... 392

Some Viewpoints on Child Psychiatry, Forrest N. Anderson, Van Nuys (Or.) ... 213

Special Announcement—C.M.A. Annual Meeting (CMA) ... 311, 376

Specialist-General Practitioner Cooperation in an Obstetrical Department, Blake H. Watson, Los Angeles (Or.) 261

Statement on Cancer Cures by the Cancer Commission of the C.M.A. (CMA) ... 62

Study of Small Bowel Tumors, A—With Special Emphasis on Clinical Aspects, E. J. Joergenson, Glendale, and Laurel A. Weibel, Los Angeles (Or.) ... 395

Surgical Principles of Incising the Renal Parenchyma, George L. Torassa, San Francisco (Or.) ... 345

Surgical Treatment of Acquired Heart Disease, The, Frank Gerbode, San Francisco (Or.) ... 185

Surgical Treatment of Mitral Stenosis, The, William H. Muller, Jr., Los Angeles (Or.) ... 285

T

(TEM or Triethylene Melamine) Trisethylene-Imino-*s*-Triazine in the Treatment of Neoplastic Diseases, Michael B. Shimkin, Howard R. Bierman, Keith H. Kelly, Elizabeth Lowenhaupt, and Arthur Furst, San Francisco (Or.) ... 26

Teratoma of the Ovary in a Sixteen-Month-Old-Child, A. Gilman, J. Smith, I. Puziss, and L. Karp, San Francisco (CR) ... 105

Tetanus Antitoxin, Antihistamine in the Prevention of Serum Reaction Following Prophylactic Injection of, A. Waxman and H. Geshelin, Los Angeles (Or.) ... 93

Thalassemia (Mediterranean Disease) Occurring in Filipinos and Chinese, John M. Nilsson, San Mateo; Harold Mills, Los Angeles; and George W. Miners, Redwood City (Or.) ... 195

Thoracic Surgery, Some Recent Advances in, Herbert C. Maier, New York, N.Y. (Or.) ... 392

Topical and Systemic Use of Cortisone in Dermatology, The, Ben A. Newman and Fred F. Feldman, Los Angeles (Or.) ... 324

Transpalatal Approach for Juvenile Fibroma, The, Walter E. Heck and Robert C. McNaught, San Francisco, (CR) ... 430

Treatment of Closed Head Injuries, Lester B. Lawrence, Oakland (Or.) ... 296

Treatment of Craniocerebral Injuries and Prevention of Anoxia, John E. Adams, San Francisco (Or.) ... 321

Treatment of Metastatic Breast Cancer in Bone, Merrell A. Sisson and L. Henry Garland, San Francisco (Or.) 265

Trisethylene-Imino-s-Triazine (Triethylene Melamine or TEM) in the Treatment of Neoplastic Diseases, Michael B. Shimkin, Howard R. Bierman, Keith H. Kelly, Elizabeth Lowenhaupt, and Arthur Furst, San Francisco (Or.) 26

Tuberculosis, Intensive X-Ray Survey for, in a Rural County, Waldo R. Oechsli, Los Angeles, C. R. Kroeger, El Centro; Harry Cohn, San Diego, and Antonio A. Adames, Holtville (Or.) 341

Tumors, Small Bowel, A Study of—With Special Emphasis on Clinical Aspects—E. J. Joergenson, Glendale, and Laurel A. Weibel, Los Angeles (Or.) 395

U

Use of Free Grafts in Correction of Recurrent Pterygia, Pseudopterygia and Symblepharon, Deane C. Hartman, Los Angeles (Or.) 279

Use of the Rocking Bed to Augment Ventilation in Patients with Poliomyelitis, Clarence W. Dail, Elizabeth Austin, O. L. Huddleston, and Albert G. Bower, Los Angeles (Or.) 15

W

Waterhouse-Friderickson Syndrome—Recovery of a Case Treated with Cortisone, James T. Fowler, Long Beach (CR) 369

Western Equine and St. Louis Encephalitis in Man, California, 1945-1950, Edwin H. Lennette and W. Allen Longshore, Berkeley (Or.) 189

Y

You and Blue Shield (I) 66

EDITORIALS

A.M.A. 1951 Meeting 52
A.M.A. Clinical Session 370
C.M.A. Constitution and By-Laws 225
Malaria in Veterans Returning from Korea 432
Medical Care on the March 308
New Study of C.P.S., A 51
Officially Yours 109

California Medical Association

Annual Meeting, Special Announcement 311, 376
Change in Method of Authorization for Home-Town Care of Veterans 438
Constitution and By-Laws 231
Council Meeting Minutes:
379th Meeting, May 12, 1951 54
380th Meeting, May 13, 1951 56
381st Meeting, May 14, 1951 58
382nd Meeting, May 15, 1951 58
383rd Meeting, May 16, 1951 59
384th Meeting, June 24, 1951 226
385th Meeting, September 22, 1951 373
386th Meeting, November 11 434
Dr. Murray Heads A.M.A. Board of Trustees 54
Executive Committee Meeting Minutes:
226th Meeting, May 16, 1951 60
227th Meeting, July 5, 1951 229
228th Meeting, August 15, 1951 310
House of Delegates Proceedings 110
Murray, Dwight H., A Tribute to 230
President-Elect (L. A. Alesen) 53
Public Relations 310
Public Relations Service Available to County Societies 371
Statement on Cancer Cures by the Cancer Commission of the C.M.A. 62

INFORMATION

Change in Diagnostic Laboratory Service 317
Civilian Medical Care to Army Personnel 180
Medical Care Costs Rise Far Less Than Other Family Budget Items 317
New Form for Reporting "Reportable Diseases" 257
Seventy-Five Per Cent of Korea Wounded Return To Duty 317
You and Blue Shield 66

BOOK REVIEWS

Allergy: Facts and Fancies 183
Allergy in Relation to Pediatrics 384
Atlas of Anatomy, An 441
Atlas of Human Anatomy 181
Brain Metabolism and Cerebral Disorders 258
Bronchoesophagology 183
Cancer As I See It 69
CHECK—Community Health Educator's Compendium of Knowledge 71
Chest X-Ray Diagnosis 383
Child Psychiatry in the Community 181
Children's Radiographic Technic 384
Clinical Laboratory Methods—4th Edition 258
Clinical Unipolar Electrocardiography 382
Clinical Use of Radioactive Isotopes 70
Cornell Conferences on Therapy—Vol. IV 318
Diabetes Insipidus 258
Diabetes Mellitus 258
Differential Diagnosis of Internal Diseases 319
Dimensional Analysis for Students of Medicine 70
Doctor, The 181
Early Diagnosis of the Acute Abdomen 383
Electroencephalography in Clinical Practice 258
Ethical Basis of Medical Practice 319
Eye Manifestations of Internal Diseases, The 184
Few Buttons Missing, A 184
From a Doctor's Heart 381
Frontal Lobotomy and Affective Behavior 442
Genetics in Ophthalmology 318
Handbook of Diagnosis and Treatment of Venereal Diseases 182
Handbook of Medical Management 184
Handbook of Medicine, Wheeler and Jack's 182
Handbook of Pediatric Medical Emergencies 320
Heart Disease 72
Hope and Help for the Alcoholic 383
Industrial Health and Medical Programs 183
Kidney, The (Smith) 184
Kidney, The—Medical and Surgical Diseases (Allen) 381
Management of Celiac Disease 259
Management of Fractures, Dislocations, and Sprains, The—Fifth Edition 441
Medical Treatment in Obstetrics and Gynecology 381
Medicine of the Year—3rd Issue, 1951 259
Metabolic Methods 442
Methods in Medicine 70
Operative Surgery, 2nd Edition 383
Pharmacologic Principles of Medical Practice 318
Pharmacology 72
Physical Diagnosis 69
Physiology and Pathology of Hemostasis 183
Physiology of the Eye 382
Pioneer Doctor 184
Poisons—Third Edition 441
Primer for Psychotherapists, A 384
Principles and Practice of Obstetrics—10th Edition 320
Principles of Public Health Administration 69
Proceedings of the Third International Congress of the International Society of Hematology 442
Psychotherapy 382
Review of Physiological Chemistry—3rd Edition 320
Skull Fractures and Brain Injuries 70
Somatic Development of Adolescent Boys 382
Study of Epilepsy, A 260

Surgical Forum 260
Textbook of Physiology and Biochemistry 71
Textbook of the Practice of Medicine, A 182
Textbook of X-Ray Diagnosis, A—Vol. I, Head and Neck; Vol. II, The Chest 181
Therapy of Dermatologic Disorders 320
Thoracic Surgery 258
Visceral Radiology 382
Wheeler and Jack's Handbook of Medicine 182
Your Sinus Troubles and Treatment 258

DEATHS

Anton, Francis L., July 30, 1951 252
Baccus, Clyde F., September 10, 1951 377
Beaudoux, Henry A., May 20, 1951 60
Beck, Horace R., June 26, 1951 176
Bennett, Edward C., June 12, 1951 176
Bonynge, Charles W., October 6, 1951 436
Bumgarner, John W., July 4, 1951 252
Burns, James E., June 19, 1951 176
Campbell, Roy, July 29, 1951 252
Christeson, Edgar L., September 25, 1951 436
Clark, Donald K., April 18, 1951 60
Coeur-Barron, Frederick H. H., September 24, 1951 377
Cook, Orrin S., October 24, 1951 436
Coulter, James D., August 23, 1951 377
Crumrine, Ralph M., July 11, 1951 252
Cummins, Harvey R., September 18, 1951 436
Davis, Benjamin F., August 26, 1951 377
Dixon, Howard B., September 21, 1951 377
Dock, George, May 30, 1951 60
Dolman, Percival, September 16, 1951 377
Dougherty, John A., October 6, 1951 436
English, Glenn G., June 11, 1951 176
Fletcher, Harold A., July 26, 1951 252
Friesen, Henry J., July 6, 1951 252
Galbraith, Alexander, October 13, 1951 436
Gaynor, Joseph, September 16, 1951 377
Goldstein, Joseph, June 28, 1951 252
Golitzin, Alexander V., May 4, 1951 252
Hillard, Carlos G., July 21, 1951 252
Hutchison, Charles W., September 18, 1951 377
Igo-Flitcroft, Louise M., June 9, 1951 252
Jones, George W., October 8, 1951 436
Lien, Fred O., June 23, 1951 252
Long, Frederick, October 19, 1951 436
Long, James, June 30, 1951 436
Mace, Lewis S., July 14, 1951 252
Marchand, Malvin C., May 19, 1951 60
Martin, Harry W., June 25, 1951 176
Morrison, Richard J., May 29, 1951 61
Mullen, Robert M., April 28, 1951 61
Needles, John W., May 20, 1951 61
Peake, William M., June 29, 1951 252
Reed, Alfred C., June 20, 1951 176
Rose, Homer D., September 26, 1951 377
Roth, Harry A., May 12, 1951 61
Rowell, William A., September 10, 1951 377
Sampson, May H., September 21, 1951 377
Scott, Robert M., August 1, 1951 252
Sherman, Julius, August 24, 1951 377
Smith, Wesley S., July 22, 1951 252
Sturdevant, Matthew C., May 18, 1951 61
Viau, Benjamin, May 19, 1951 61
Welfer, Clarence R., May 6, 1951 61
White, John F., August 15, 1951 377
Wiley, Edwin H., May 28, 1951 61
Wilson, Homer S., May 1, 1951 61
Wold, Alvin R., May 16, 1951 61
Wood, Dorothy A., June 8, 1951 176

v. 75 1951
California medicine
37977